IN THE CIRCUIT COURT OF DESOTO COUNTY, MISSISSIPPI

KAY T. NUNNALLY, INDIVIDUALLY
AND ON BEHALF OF ALL WRONGFUL
DEATH BENEFICIARIES OF JOSEPH
LEE NUNNALLY, DECEASED — PLAINTIFF

V. — CIVIL ACTION NO. CV92-270-CD

R. J. REYNOLDS TOBACCO
COMPANY AND BASIC FOODS, INC. — DEFENDANTS

VOLUME 5
DAILY COPY TRIAL PROCEEDINGS
DATE: 6/29/00
Opening Statements
WITNESSES: Dr. David Burns
Dr. William Fidler (By Depo)

APPEARANCES:

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Brooks Court Reporting, Inc.

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(Time Noted: 8:38 a.m.)

(General Exhibit 1 marked for identification.)

JUDGE CARLSON: As I stated yesterday, this is a very pretty courthouse, and it will be even prettier when we get through with renovation. But there's a lot of noise. I'm ready for the jury.

Good morning, ladies and gentlemen. I hope you've had a good afternoon and evening, and are ready to go now. Since you've had the break, I do need to inquire if you've had occasion to talk to anybody about the case or any outside information received gained on the case? Anything you need to bring to my attention regarding any discussion received on the case? I take it by your silence then there's been no contact, or discussion or information received, so we're ready to go forward. I will go ahead and mention a couple of things to you.

Number 1, I will invoke the rule as to witnesses. And that simply means under the rule of evidence, that witnesses stay outside the courtroom, and they're called in one at a time. And I mentioned yesterday as far as the rule about not talking about the case, there was no exception to

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that. But as you know, there are exceptions to some rules. And we do have exceptions to this rule of evidence regarding who may or may not stay in the courtroom.

Certainly the parties can stay in the courtroom. And any corporate representative and any expert who might be called to testify during the trial has a right to remain in the courtroom. Because sometimes an expert's testimony or opinion might be based, at least in part, on other testimony heard in the courtroom. But other than that, the witnesses would be excluded.

Now, also before the presentation of the evidence begins, the attorneys have the opportunity to talk to you about the case in opening statements. And I will mention to you here and caution you that what the lawyers say will not ultimately be considered by you as evidence in the case.

They're not witnesses. They do have the right, though to kind of give you the overview of the case, though, and let you know how they feel the case may develop here during the course of the trial. After opening statements, we'll move into the presentation of the evidence. All right. Mr. Merkel.

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MR. MERKEL: Thank you, Your Honor.
OPENING STATEMENT BY MR. MERKEL:
MR. MERKEL: May it please the Court and counsel. Good morning, ladies and gentlemen. We are about to start into a case that is brought by the Nunnally family. That is the widow and her four children of Joe Nunnally to make a tobacco company, R. J. Reynolds, responsible for its actions.
Its actions negligently undertaken and motivated, we'll show you, by profit motive, led to the foreseeable death of Joe Nunnally in 1989 from bronchogenic squamous cell carcinoma, lung cancer, a very, very common occurrence to smokers. Statistical data will show you that one out of four to one out of six people who smoke two packs of cigarettes a day for 20 years are going to come down with this disease.
It's about the same chances or odds you have playing Russian Roulette with a six-chamber revolver. We're going to show you from the evidence that 40 percent of smokers of this type are going to die prematurely of some tobacco-related disease.
This is a very dangerous product. Now, as you've heard and as many of you commented and put in your questionnaires, this is going to be a case

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about responsibility. It's going to be a case about choices. Both parties in this case had choices and made choices at all times over a long spectrum. Both are responsible for their choices, true.
Joe Nunnally's first exposure or confrontation with cigarettes at all came in 1960 when he was an eight-year-old child. R. J. Reynolds has known about cigarettes for the whole 19th, 20th century. We're going to show you from the evidence that cigarettes, which are one of the main products of R. J. Reynolds, are consumable in four -- they consume tobacco in numerous ways.
There are three ways you can smoke it, cigars, pipes, cigarettes. You can chew it, you can dip it. But beginning in the first half of the 20th century, the automated manufactured cigarette exploded the usage of the tobacco in America, simply exploded the numbers. The per capita number of cigarettes smoked today per day went up exponentially. So did the rise in lung cancer. And by the 1950s, this had been noted and observed by the scientific community, and they were beginning to make studies on the correlation between these the parallel lines on the graph of smoking going up and lung cancer going up.

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In 1950, the first epidemiological study came out and linked positively smoking of cigarettes to lung cancer. That was 1950. Joe Nunnally was born in 1952. 1953, a scientist by the name of Wynder, took the tar product from smoked cigarettes. Black, gunky stuff you find on the end of the filters and in pipes and so forth, and painted the backs of mice, laboratory mice, with this tar. It caused tumors, cancer on the mice. This was reported to the scientific community.
By the mid-'50s, there had been both

retrospective and prospective studies done by the scientific community that the positively linked cigarette smoking to lung cancer.

In July of 1957, the then Attorney General -- excuse me, Surgeon General of the United States, a man by the name of Bernie, came out and in his official capacity as Attorney General made a warning to the American public that cigarettes caused lung cancer.

In 1953, a R. J. Reynolds' scientist named Teague, noted the literature, noted the findings of these scientific bodies and studies, and made a recommendation to Reynolds that they take some action about this product. After the Attorney

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General went on record in 1964, a committee was convened. And it was convened because of the opposition of tobacco to the idea that cigarettes caused lung cancer. And the members were appointed to that committee by the Surgeon General giving the tobacco industry veto power over the members who sat on that committee. In other words, if they didn't approve them, they wouldn't sit.

That committee in 1964, concluded lung cancer is caused or cigarette smoking causes lung cancer. Joe Nunnally was, in 1964, 12-years-old. At no time from 1950 to the 1966, did R. J. Reynolds ever acknowledge to the American public that cigarette smoking causes lung cancer. Never in any way was such an acknowledgment made.

Now, if you go back in the chain to get the two parties side by side, Joe Nunnally was born in 1952. In 1960 -- and he should have been picked up, spanked, slapped, shaken, but at the instance of his big brother, his 10-year-old brother, Joe Nunnally began smoking cigarettes, a stupid act by an eight-year-old child.

R. J. Reynolds in 1960 had never acknowledged smoking caused cancer. Joe Nunnally continued to smoke. It's habit forming.

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Foreseeably, he would continue to smoke. Tobacco is addictive. It contains an addictive drug, nicotine.

R. J. Reynolds knows that drug is addictive. We'll show you that they've done studies on it. They've noted that it is an addictive drug.

MR. ULMER: Your Honor, I hesitate do object. But in my view, this violates the earlier ruling by the Court.

JUDGE CARLSON: I'll permit it at this point. Both counsel know that in the end the jury will have the evidence before it as to whatever they can consider.

MR. MERKEL: Thank you, Your Honor. R. J. Reynolds, we will show you, did studies, the man, Teague, who explored the properties, the nicotine properties of tobacco. He commented in literature to their home offices, to their uppers, highers, that nicotine was addictive. That, in fact, what they were selling was nicotine. That the cigarette was a delivery device for nicotine. That there was an optimum dosage of nicotine that would make a person continue to crave and want cigarettes.

We'll show you that the amount of nicotine was calculated, studied and manipulated. In order to try to deliver the optimum dosage to

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feed an habituation habit. So when Joe Nunnally started smoking in 1960, it was foreseeable to R. J. Reynolds that anyone who had that first cigarette, who started would continue to smoke because of the addictive qualities of nicotine. We're going to show you that 95 percent of people who begin and become addicted to nicotine are unable to quit when they the try. Everyone doesn't try, but 95 percent of the tryers are unable to completely quit. It's a very addictive drug. This was known to the tobacco industry.

We'll show you that the tobacco industry never acknowledged to the public that cigarettes and the nicotine in them are addictive. They deny that they're addictive. They continue to deny that they're addictive.

Joe Nunnally began to smoke at age eight. He continued to smoke into the '60s. From then until 1966, yes, Joe Nunnally made choices of an eight to 12 or 14-year-old child based on what he knew, what children do. And, incidentally, what children knew was also something that R. J. Reynolds studied, and had opinions about and reflected in their internal documents. They analyzed why people began to smoke. Particularly, why young people

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began to smoke, peer pressure, insecurity, to be in, to be macho, to have fun, to be part of the group. All of these characteristics were studied and analyzed by adults at R. J. Reynolds.

MR. ULMER: Your Honor, I really do not want to interrupt Mr. Merkel, but could I have a continuing objection to the violation of the earlier rulings by the Court.

JUDGE CARLSON: Yes, sir. It will be so noted on that ground.

MR. ULMER: Then the I will not object any further.

JUDGE CARLSON: All right.

MR. MERKEL: R. J. Reynolds was well aware that young people would smoke and would become addicted. In fact, their very business depended on it. If you don't have entry level smokers, you don't have smokers that continue through. If everybody quit, there would be no smokers in 20 or 30 years. So they were aware of this phenomenon. This was foreseeable. Foreseeability will be one of the things you will have to find in a negligence action. Whether the action taken, if negligent, could foreseeably cause the effect or cause an effect that would be harmful.

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And we would submit we will show you that R. J. Reynolds foresaw, knew in advance, that if they could get a person to try smoking, to begin smoking, the addiction would take over. And they would continue to smoke. We'll show you that cigarettes are not something that the body demands or craves. We aren't born wanting cigarettes.

There's no built in innate desire for a cigarette or nicotine. It's a learned habit. And it's an unpleasant habit to be learned. We'll show you R. J. Reynolds knew that. They comment in their internal literature about the fact that as far as cigarettes, they taste bad, they sting, they burn, they cause coughing. So we've got to make it easier for an entry level smoker to get into this pattern, for him to pick it up until the nicotine addiction takes over, and then he's there.

We'll show you that, over years, smoking affects the lungs in this manner. The cilia on the lungs are a protective hair-like thing that's there that protects you from irritants that you take in through normal breathing. And when you are tickled by these cilia, you cough, and you expel whatever the harmful or the noxious substance in. But over years of smoking, the cilia disappear completely

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there. And in time, the mucus lining will disappear, we'll show you. And the cells begin to pack down and become disformed.

The nice nucleuses that are even and round in a normal lung cell begin to grow and become funny. And then they become black end and misshaped. And eventually a carcinoma begins on the surface there, and it then spreads, penetrates, goes into the bloodstream. And then metastasizes to other parts of the body. It's a long process. Extended smoking, the more smoke, the more inhaled, the more cigarette, the sooner the process is going to happen.

Again, we'll show you statistically that people who smoke for 20 years, two packs a day, one in four, one in six is going to have that process occur. Nobody can foresee who it's going to be. R. J. Reynolds couldn't foresee that it would be Joe Nunnally would be those one out of four. But somebody, one out of four of their customers is going to be in that shape.

Now, three years after the Attorney General first made this statement in 1957, Joe Nunnally took up smoking. R. J. Reynolds never, until 1966, ever took any action whatsoever with

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regard to the causal effect of cigarettes to cancer, and they took no action in 1966. The Congress of the United States mandated that cigarette companies place on the packages a warning that said, "Cigarette smoking may be hazardous to your health."

Joe Nunnally continued to smoke. He made a choice. He continued to make that choice everyday when he got up and smoked. The adults at R. J. Reynolds continued to make a choice everyday when they got up, and decided they were still not going to acknowledge to the American public that cigarettes cause cancer. They were still not going to acknowledge that they were addictive. They were not going to acknowledge that you needed to quit. That you -- if you quit, your chances of this disease here would go down. From '66 to '70, conditions stayed the same for both of these negligent people, if we're talking about their

actions. The pack contained the label, both continued to do the same thing.

1970, the Attorney -- United States Congress changed again the labeling requirements and forced the tobacco industry to say now, "The Attorney General has determined that cigarette smoking is dangerous to your health." We've gone

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from "may" to "is" in five years. Everybody continued to do the same thing otherwise. Joe Nunnally continued to smoke. R. J. Reynolds continued to keep quiet about the association between cancer and smoking. Still would not admit it was addicting, didn't warn people to quit. Everything stayed the same, moving down parallel tracks. That continued for about 15 years. Then, and in 1985, a label finally came out that said, cigarette -- the Attorney General has determined that cigarette smoking causes cancer and other things. This is 1985. By this time, Joe Nunnally has been smoking for 25 years. He is addicted. He is a three-pack-a-day smoker, heavy addiction.

R. J. Reynolds, as a company, other than what's on the label, still says nothing about the cause between smoking and cancer. Nothing about the addictiveness, nothing about the need to quit. Nothing other than what they're made by the United States Congress to put on the pack.

They also for the first time in 1985 began putting advertising -- no, excuse me, I believe 1970, I believe, was when the advertising was first started, too. That said that it may be or is hazardous. But by 1985, the ads and the tobacco

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packs were carrying information concerning cancer for the first time.

Joe Nunnally went on from 1985 to 1988 when he suddenly became ill, was diagnosed with bronchogenic squamous cell carcinoma. We'll show you the hospital records. The doctors' reports noted that he was a three-pack-per-day smoking history, squamous cell carcinoma, poorly differentiated squamous cell carcinoma. Dr. W. J. Fiddler who you will here testify, poorly differentiated squamous cell carcinoma by the pathologist. Squamous cell carcinoma of the lung, diagnosis: Bronchogenic squamous cell carcinoma.

We will show you what that diagnosis means. "Bronchogenic" means it had its origin in the lung, and the squamous cell is a type of cell that the carcinoma is by pathology. And it is a type most generally associated with smoking, with lung cancer caused by cigarette smoking. That's what the medical records say, squamous cell carcinoma.

R. J. Reynolds, I anticipate, is going to bring people from long distances away, doctors, pathologists, to come in here, take that witness stand. And tell you Joe Nunnally didn't have

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squamous cell carcinoma. We don't have a clue what he had. But we know it wasn't squamous cell carcinoma. That's going to be their testimony

today. They're going to deny that Joe Nunnally had squamous cell carcinoma. We're going to show you from Dr. Fiddler that that's what his treating physicians diagnosed him with. That's what they treated him for when they tried to save his life.

We're going to show you he was sent to M. D. Anderson in Houston, Texas, a fairly decent medical facility. And they resected part of his lung, took it out. We'll show you that doctors do not resect lungs, if a cancer arises anywhere than other than in the lungs.

In other words, if you have a cancer that started somewhere else in the body and metastasized, traveled through the bloodstream to the lungs, they will not do an operation. There's no reason, chemotherapy, radio therapy, these types of things are what you do in that. You don't do a biopsy or procedure that would take it out, because it's already in other places. M. D. Anderson resected his lung. They were positive to a medical certainty of what he had, and they acted on it to try to save his life.

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You'll hear experts that will tell you I guess they committed malpractice. They didn't know what they were doing. Because this is not bronchogenic. This came from somewhere else. They can't tell you where it came from. They'll say well, maybe the liver, maybe the spleen. We don't know. But it didn't come from the lung. That's going to be the testimony you're going to hear from the experts brought in here by R. J. Reynolds. We're going to show you, and feel there's no question, Joe Nunnally had bronchogenic in origin, squamous cell in type lung cancer caused by smoking three packs a day, beginning when he was eight years old, some 31 years prior to his death in 1989 at the age of 37.

We're going to show you that that death was foreseeably caused by the ingestion of the tobacco, the tars, the nicotine. Things that are contained in it, and everyone knows are contained in it, that he was simply one of the one in four or one in six that would be foreseen to contract this disease and die of it.

Our theory of this case, there are two legal theories: One is negligence. And negligence is simply that a person or persons in the form of a

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company -- and a company is just like a person -- they act through persons, their decisions are made by persons. We say that this company was negligent in its marketing of tobacco products and that the as a result of their negligent acts. The actions, the inactions, the things they did and didn't do, that foreseeably, Joe Nunnally contracted lung cancer, and died of it.

They're going to tell you and say Joe Nunnally was negligent, and Joe Nunnally may well have been. If he wasn't negligent, he was certainly stupid. He was a foolish eight-year-old child that went along with a bigger brother and with peer group, and we don't deny that. And there'll be no

proof to the contrary. But in a negligence negligence situation, what the jury would be required to do is to apportion damages or apportion fault. Apportion responsibility between the people who are responsible for the end result.

The end result is the death of Joe Nunnally, and R. J. Reynolds plays a major role in that. They have responsibility for their products. They have responsibility for what they put into the marketplace with knowledge of its effect. They have a responsibility to tell the public about the

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factors associated with the use of their product that might be harmful. They have a duty to make a reasonably safe product.

We'll show you that cigarettes are one of the few products that when used exactly as intended, the way the manufacturer intends, the only way you can use them, they'll cause illness and death. Most products, if you use them carefully, if you use them in accordance with instructions, if you use them in accordance with their labels, if you don't misuse them, won't harm you. Some are more danger -- more dangerous and have more risks associated than others. We'll show you if you use a skill saw, you know, you can cut your hand if you're not careful with it. If you use machinery, you can get into the machinery if you're not careful. But we'll show you the only purpose of a cigarette is to put one end in your mouth, light the other end and draw the smoke from it into your lungs. And if you do that, and you're one of the unlucky one in four, one in six, one of the 40 percent, you're going to get a disease from it. It's as simple as that.

The second theory of liability in this case is called, "strict liability and tort." And what that means is the manufacturer who designs,

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makes, markets a product, because he has control over that product, and whether it's going to be sold or not. And how it should be sold, and who's going to use it. And how they're going to use it, should be strictly liable for any harm that comes from that product if it is unreasonably dangerous. And what "unreasonably dangerous" means, the test for you to apply to determine whether a product is unreasonably dangerous is called, "the risk utility test."

And it's just like taking an old fashioned set of scales, the kind that you put stuff in the pans, and they balance. And in one hand, you balance the risk. What is a risk? How often does it happen? How frequently is it going to occur? Is it a serious risk? In this instance, the risk is death. How often is it going to happen? 15, 25 percent of the time, other illnesses up to 40 percent of the time you use it. That's in one scale. That's a fairly heavy burden of risk in any kind of scale.

And on the other side of the coin, utility. And what is the utility of a cigarette? Well, to some of you who smoke, I'm sure now it is a craving, something you need, something you want. But where did that come from? The only utility of

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it is to satisfy an addictive habit that was created by smoking the things in the first place. The settling of nerves, the feeling of euphoria, or whatever a smoker may get from it is a learned response. If you hadn't gotten it in the first place, if you had never had one, you would have no need for this. That's the utility on one side against the risk of death on the other. That's one of the tests.

So there are two prongs to this lawsuit. Evidence will be presented on both. Some of the evidence will apply to both, the same evidence. Under one, if they are negligent, if they did acts, took actions and inactions that a reasonably prudent manufacturer wouldn't have done, they're negligent. And if those actions proximately caused a foreseeable result, they're responsible.

Under the other, if they made a product and put it into the marketplace, the risk of harm from which outweighed its utility, they're liable. And if damages arose from that, they're responsible for those damages. Two roads to the same end. Either one is sufficient. They're negligent if the product is more dangerous than it should be, unreasonably dangerous. Its risk outweighs its

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utility. Either way, they're responsible, and they're liable.

Now, what are the damages in this case? There are three kinds of damages here, really. Joe Nunnally has been made responsible. He's paid the ultimate price. He's dead. His life has been lost, and the effect of that on his family comes in three different parts. Number one, Joe Nunnally has lost or his family, Kay Nunnally and the children -- and the children were ages four through 10 at the time of his death, four children. They lost his income, his earning capacity. Proof will show that Joe Nunnally was -- rose to the top as a manager in McDonald's organization, managed a store in Southhaven for years. Was a good provider for his family.

He was an asset to the community. At McDonald's sponsored events, he was active in the community. He was a good man. He went from that job to another job and became manager in a very highly successful salesman with a rental organization that rented electronics, and TVs and things like that. He was a good earner.

We'll show you, based on actuarial calculations of the present value of his stream of

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income. In other words, dying at 37, had he continued to earn through his normal work life expectancy, we'll show you he would have earned approximately $920,000. That's the present value of it. He would have earned more than that. But since he would be getting it at this point, it would have a value today of $920,000.

We'll show you that he lost -- his family had to pay medical expenses for Joe. They paid funeral expenses. We'll show you that their

out-of-pocket losses, his future earning power, the medical and the funeral amount to approximately a million dollars. And all that does is simply replace the tangible dollars associated with a life. That's one element of the damage. There are two more. Two that are much more important, and for that reason, possibly more valuable.

Another one we'll show you is the loss to Joe Nunnally of his life. Of not being able to watch his children grow up, not being able to see them become adults. Become married and enjoy his grandchildren, all the things we enjoy, and we want to do in this life. His was cut short at 37. That's a loss to Joe Nunnally.

We've also got losses to five other

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people. The loss of a husband and mate to a woman, the loss of a father, counselor, a companion, a friend to four children. One of them four-years-old when they lost their father. Each of those individuals, we will show you, deserve to be compensated for that loss. What they've lost by losing a father.

We'll show you what Kay Nunnally has lost by losing a husband. What she's had to do to take up the slack, become a wage earner herself. Work two jobs to meet ends, to raise and support these four children. Because Joe Nunnally's income was gone. These the will be the elements of damage that will be presented.

So that, ladies and gentlemen, basically, are the elements of this case. It's a case for responsibility. For R. J. Reynolds to assume responsibility for its actions, its negligent actions, and for marketing a product that's risk far outweighed its utility. It's a suit for money damages.

If you'll listen to the evidence, listen for what R. J. Reynolds is going to tell you about whether cigarettes cause cancer. Listen to what they tell you about whether addiction comes from

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smoking cigarettes. Listen to what they tell you about why they didn't tell the American public what they knew in their internal laboratories and in their inner offices. Listen to their witnesses that tell you that Joe Nunnally did not have lung cancer and did not have squamous cell carcinoma. Listen carefully to what they tell you.

This is a case about choice, choice made by an eight-year-old child. A choice made by adults sitting in offices, tables, planning, thinking, make being profits. Choices by both, responsibilities by both. I thank you.

JUDGE CARLSON: Thank you, Mr. Ulmer.

OPENING STATEMENT BY MR. ULMER:

MR. ULMER: Thank you, Your Honor. May it please this honorable Court. Members of the jury, let me tell you what this case is and is not about. First what it is not about. In many cases, product liability cases, the Plaintiff contends that there is a manufacturing defect. And a product that when the company manufactured the product, something

went wrong in the specifications, and it didn't come out right. That's not this kind of case at all.

The Plaintiff doesn't say that the Reynolds' cigarettes were manufactured wrong. They

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say that our cigarettes were manufactured exactly according to our manufacturing specifications.

In some product liability cases, the Plaintiff will say that you should have warned. You should have warned better. You should have warned different. You should have done more about warnings. But in this case, they don't make that contention at all. They make no claim that R. J. Reynolds Tobacco Company failed to warned. Now you're going to hear evidence, a considerable amount of evidence, about the warnings that went on the cigarettes starting in 1966. And have been on there continuously since 1966. That's a period of about 34 or 35 years that warnings have been on the packages. But they don't even claim that prior to 1966 that in any way R. J. Reynolds Tobacco Company failed to warn with respect to the hazards of smoking.

They make no claim, members of the jury, that Reynolds somehow duped or tricked young Joe Nunnally into smoking. Because they know that's not so. Young Joe Nunnally -- whatever age he started smoking, he started smoking because he wanted to start smoking. For whatever reasons they may be. They make no claims there's a manufacturing defect.

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They make no claims about warning. So then you ask what about a design claim? Do they have a design claim?

In other words, like with a fuel tank, if you put in it the wrong place on a car or the metal's too thin. It can be designed wrong, and it can cause people to be injured, if it's designed inappropriately. But they make no claim here that our cigarettes were designed inappropriately, or that there's anything wrong with the design of our cigarettes.

So we get down to this, members of the jury, what is Reynolds being sued for? And as you sit here and think about what Mr. Merkel said, what are we being sued for? We sell a lawful product that has a warning on it that has been deemed by Congress to be adequate as a matter of law. And for which there's no way to make a safe cigarette. In other words, there's no feasible alternative design. You didn't hear Mr. Merkel tell you, if they had only done this or only done that, that would make the cigarette safe. So we're being sued for selling a product with an adequate warning as a matter of law for which there's no feasible alternative design. But maybe most important of all, members of

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the jury, when you put all that together, you have to consider that we're selling a lawful product with an adequate warning for which there's no alternative design, but the characteristics of which were well-known to Joe Nunnally.

Joe Nunnally knew the hazards of smoking

cigarettes. He knew and appreciated the inherent characteristics of cigarettes. So the issue before you is should Joe Nunnally be compensated for willingly and knowingly choosing to use this product? Should he be compensated for that, and that's the issue that you have to decide.

Now, let's that you can about Joe Nunnally and his knowledge of the risk of smoking cigarettes. Mr. Nunnally was born in 1952. That was one year after I was born. I know a little something about that era. He attended school at Horn Lake Junior High School and high school. And Mr. Nunnally, in going through life, in going through school, learned about the hazards that are associated with cigarette smoking. Members of the jury, he lived in a house where his mama smoked and his daddy smoked. And in his presence, his mama would refer to cigarettes as "cancer sticks" or "coffin nails." He went to school. And in the 5th

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grade, we'll bring in his 5th grade teacher who will tell you that she taught those students about the hazards of smoking, that it would deteriorate your lung.

So going back to his earliest days, Joe Nunnally was aware of the risks and the hazards associated with cigarette smoking. When he went to junior high and high school, he took a class where they taught about the hazards of smoking cigarettes. You'll hear testimony from his friends while he was in high school that he would refer to cigarettes, he and they would refer to cigarettes as cancer sticks and coffin nails. So Joe Nunnally was aware of the risk.

Now, you've heard Mr. Merkel tell you about the '64 Attorney General's report. I think he meant to say the '64 Surgeon General's report. But I want to talk to you about that. Because that was a very important event. And as you go through this trial, you'll hear more about it in this controversy that surrounded the smoking and health controversy.

In 1964, when Joe Nunnally would have been about 12-years-old, the Surgeon General of the United States, his advisory committee determined that smoking caused cancer in males. The Surgeon

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General made that determination in 1964. He said in his judgment there was enough proof that smoking causes lung cancer in males. He described it as the single largest preventible cause of death in the country.

Now, what did the Surgeon General do with this information? What did the Surgeon General do with that information? And what he did with the information was provided it to the Congress of the United States. And the Congress of the United States the reviewed this information and reviewed the data and had the choice, members of the jury, at that point in time, to outlaw cigarettes. That was certainly before the Congress. The Congress could have outlawed cigarettes. Could have said, "We hear you, Surgeon General, we hear what you've got to say, and cigarettes cause lung cancer."

But that's not what the Surgeon General of the United States did -- I'm sorry, the Congress of the United States did. In 1965 or 1966, the Congress enacted the Federal Cigarette Labeling and Advertising Act and as a part of that act, the Congress required each package of cigarettes to carry a warning label. And I would like, with your permission, to show you the labels that have gone on

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the cigarette packages over the years, and if I could put up just a board are two.

Set up these exhibits for the Court, too, Your Honor. I hope everybody can see this. I'll swing it around for you. But what the Surgeon General's warning said starting in 1966 was, "Caution: Cigarette smoking may be hazardous to your health." In 1966, Joe Nunnally would have been about 13 years of age. I don't know exactly what the proof is going to show. But I know he lived at home, and he probably couldn't smoke at home. And he went to school everyday and would have been in about the 7th or grade. So the extent of his smoking, if at all, is unknown to me. We'll have to hear the proof on that as we go along.

Then in 1970, a new warning went on each package of cigarette, and the warning said, "Warning: The Surgeon General has determined that cigarette smoking is dangerous to your health." And in all the print advertisements, there was a warning, "The Surgeon General has determined that cigarette smoking is dangerous to your health." Now, you need to remember -- some of you may be old enough to remember back that radio and TV advertisements were prohibited starting in about

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1970, in conjunction with this act of Congress.

Now, in 1985, the Congress of the United States decided there should be warnings on all packages of cigarettes and on all billboards that would be on a rotating basis. And the first one says, "Surgeon General's warning smoking causes lung cancer, heart disease, emphysema and may complicate pregnancy." Next one, "Surgeon General's warning: Quitting smoking now greatly reduces serious risks to your health." And it goes on and warns pregnant women that smoking during the pregnancy may result in fetal injury. Finally, "Surgeon General's warning: Cigarette smoke contains carbon monoxide."

So these warnings were on all packages of cigarettes that Joe Nunnally smoked after 1966, one or the other of these three warnings. And members of the jury, every time he took a cigarette out of a package, he may not have read the -- read the warning, but he certainly had the opportunity. The warning was right there for him to see.

Now, I told you a moment ago that Joe Nunnally chose to smoke. He made that decision. No one can blame R. J. Reynolds for that. And they don't blame R. J. Reynolds for that. He chose to smoke. Not only did Joe Nunnally choose to smoke,

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he chose not to quit. Members of the jury, with all the information that was provided by Congress and

with all the information that he knew, personally, he made the decision not to quit. And you're going to hear proof in this case that Joe Nunnally never quit, never tried to quit, never went to a clinic so he had help in quitting. Never went to a doctor to seek help in quitting. He chose to continue to smoke. He chose never even to attempt to smoke. That's according to his wife, Kay Nunnally. Mrs. Nunnally has testified that according to her knowledge, Mr. Nunnally never -- never tried to quit. You'll hear testimony from Mrs. Nunnally, who is a very nice person. And she says that, quite frankly, her husband just loved the smoke. He loved to smoke. He liked to smoke, didn't want to quit, wanted to continue to smoke.

Now, the Plaintiff will say well, you know, we'll excuse him from that because he was addicted. But y'all, don't be fooled by labels. All that is is a label. If you choose to quit and if you're motivated to quit, you can quit. And we prove it everyday in this country. In this country, there are 50 million former smokers. Somehow, some way, they were motivated, and they overcame that

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addiction excuse.

Now, I'm not going to stand here and tell you that it's easy. Because I don't think it is easy for some people to quit smoking. I think it's hard for some people to quit smoking. I think they want to smoke. I think they do derive satisfaction from the nicotine. It does something for them. It relieves stress. It makes them work more efficiently. It helps them with weight control.

It has benefits to that person that I don't think we have a right to judge and to say it has no benefit. It's like if I go buy a milkshake, or if I go buy a candy bar, you know, what real utility does that -- well, it has utility to me because I wanted it. I wanted a milkshake, I wanted a candy bar. So it's hard for us to judge what somebody else -- the utility someone else derives from something that they want.

Now, I said there are 50 million former smokers in this country. 90 to 95 percent of those people have quit on their own. They did it cold turkey. They had no help whatsoever, and they quit. There is a tremendous decline, there'll be no dispute about this -- of the number of smokers in this country. Nearly half of all living adults who

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have ever smoked have quit. That will not be in dispute. So regardless of what they say about addiction, people can quit, and they do quit.

Now, let's me talk to you about what are the benefits of quitting? What do you get out of quitting? And what you get out of quitting is a tremendous reduction in the risk of lung cancer. If you quit, and the Surgeon General has said in number numerous of his reports, that after 10 years of quitting, your risk of cancer begins to approach that of one who never smoked. Let me repeat that. After 10 years of quitting, your risk of lung cancer approaches that of one who never smoked. Those are

not my words. Those are the words of the Surgeon General.

So Joe Nunnally chose to smoke, and he chose not to quit. And there are significant benefits associated with quitting smoking ago described by the Surgeon General.

Now, we talked -- we talked about these risks associated with smoking, and if the risks were known to Joe Nunnally. Then the risks were known to R. J. Reynolds. So it's fair for you to ask well, then, what, then, did R. J. Reynolds do about the risk? What did Reynolds do? And the proof in this

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case, members of the jury, is going to show that starting back in the '50s, when this health controversy first arose, that Reynolds did its best to the identify the constituents or the chemicals that were located in smoke that were carcinogenic to mice.

In other words, carcinogens are agents that cause cancer. Reynolds tried to identify not only these carcinogens, but all of the chemicals that are located in smoke. Because you've got to know what's there so you can know if it can be eliminated. And what Reynolds did was try to selectively remove any of these bad actors, any of these carcinogens from smoke.

But what we found was that if you tried to go in there and chemically and selectively remove one thing, what happened was -- very often was, you created something else that was worse. By altering one chemical, you can have drastic effects on another. So that -- that procedure did not work that well. But it was endeavored by R. J. Reynolds.

Now, then what do you do if you can't go in and selectively remove things? What we did was we thought well, let's try to generally remove, you know, the tar to the extent that we can and the

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nicotine to the extent you can and still give someone a cigarette. So we undertook general reduction techniques. And I honestly think, members of the jury, you're going to be fascinated as we go along in this case at how you make a cigarette. It's absolutely fascinating. And we look forward to teaching you something about that as we go along with some of the Reynolds' scientists. But let me put up a board with your permission, and just give you some of the examples of the techniques that were employed by Reynolds to eliminate or reduce the risks associated with smoking.

The first thing the Reynolds did back in the 1950s was one of the first companies around to invent the filters. You'll hear cellulose acitate. And there was just phenomenal work done to find just the right kind of material to filter out as much tar and as much bad actors, as much bad things in the smoke that occur there when you light and burn a cigarette. Reynolds was one of the first to come out with the filters in the 1950s. Now in this country about more than 95 percent of all cigarettes are filtered.

Another thing that's fascinating to me is

that Reynolds learned that in the -- in the tobacco leaf most of the nicotine is actually located out in the leaf, not in the stems. And they came up with a process called, "reconstituted tobacco" where they used -- they used these stems in the tobacco product to help reduce the level of nicotine that's there. I said reduce it, members of the jury, not increase it. To reduce increase the level of nicotine that naturally occurs in tobacco. When you grow a tobacco plant, do all of you understand that when a tobacco plant is grown, nicotine is there, it's in the roots. Nobody puts it there except nature. It's there naturally.

But we discovered there was less nicotine in the stems, and came up with a procedure to use that. And had another effect, helped to reduce cost. So it worked good for the consumer and manufacturer. Another things that Reynolds invented is something called, "expanded tobacco." It's like popping popcorn. The less tobacco you burn in a cigarette, the less tar and less nicotine that you have. So they came up with this concept of expanding tobacco. Here you see you start with this much tobacco, and you expand it. You wind up with something that will fill the tobacco rod and will reduce the amount of tar that's delivered to the smoker.

Another thing we did is reduce the circumference of the cigarette that we provided for filter ventilation to would dilute the smoke with air, and porous paper and other procedures, all with a view towards making our cigarettes as good as they could be made.

Now, while I'm talking about tar and nicotine -- put up another board and just talk to you for a minute about tar and nicotine. Tar -- when you see smoke in the air, those -- that's the tar. That's particles. When you look at the end of a filtered cigarette, and you see yellow, that's tar. Tar is not something that is put into a cigarette. It naturally occurs any time you light and burn organic material, you're going to get tar. So when you light and burn a cigarette, you're going to get tar. Tar is not something that anybody puts there. It is just a natural by-product of lighting and burning tobacco.

Now, nicotine, I think you'll be interested to learn about tar and nicotine as we go through the trial. You hear a lot about nicotine. And the thing I think you'll be surprised to learn is -- and even the Plaintiffs' expert, I think, will agree with this, that the carcinogens, the bad things, that are in smoke are located in the tar. They're not located in the nicotine. The nicotine has been reported to have minimal or little or no carcinogenic effects whatsoever.

And it's the nicotine, I don't think anybody hides this at all, members of the jury, nicotine is one of the principal reasons people smoke. They smoke for a lot of reasons. But one of

the reasons people smoke for is nicotine. That's not a secret, and I don't think it's ever been a secret. That nicotine has a slight pharmacological effect. It relieves stress, it reduces tension, they smoke because of the nicotine. But let me show you this.

Because of the procedures I just showed you, the reconstituted tobacco, the puffed tobacco, the filters, the tar and nicotine levels in the cigarettes has gone down drastically since the 1950s. If we look at 1957, and we look at the tar per milligram in the cigarette, it was about 35. Now as of 19 -- I think this is 1987, 1988, the tar is down around 12 or 13 milligrams per cigarette. So because of the efforts of the tobacco -- of R. J. Reynolds, the tar in cigarettes has gone down more

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than 60 percent. The same is true for nicotine. You see here in 1957 was about -- run the line out, it was two-and-a-half milligrams per cigarette. It's now down around one milligram per cigarette. Now, that's not all that Reynolds did to try to make a product that people wanted, and that people would use but that had as little risk as possible associated with its use.

We experimented with everything from petunia leaves to corn cobs as a substitute that for tobacco. But y'all people don't want to smoke petunia leaves. So if you make something, it doesn't do any good if you make it and can't sell it. So we looked at more than a hundred different tobacco substitutes with an idea of trying to solve any problems that may be associated with the use of tobacco.

Now, one other thing that I want to talk about before I leave this subject that I honestly believe that when you hear about it, you're going to be fascinated with it. Starting in the mid-1980s, R. J. Reynolds set about to develop a cigarette that did not burn tobacco, as radical as that sounds. It didn't burn tobacco, it heated tobacco. And Reynolds spent millions, and hundreds of millions of

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dollars trying to develop a cigarette that would heat but did not burn tobacco.

And in 1988, we test marketed this product. It was called "Premier." It was put out in some test markets. And it did not meet with any success. The customers did not like the Premier cigarette. It was hard to stay lit. It didn't have the right taste. And so this product that we worked on, and spent so much money on was a failure in the marketplace. Not only was it a failure in the marketplace, but it was a failure with the public health authorities. They -- they condemned the Premier cigarette. But I'm looking forward to the day when a scientist from Reynolds is in this courtroom and can tell you more about that interesting concept of Premier. But the point, members of the jury, is that Reynolds has not sat on its hands. We have hundreds of scientists that have worked diligently to improve the products that are sold to our good customers.

Now, Mr. Merkel told you that the test, the test for determining whether or not cigarettes are defective and unreasonably dangerous, is called, "the risk benefit test." And he told you about, really, only one of the elements of that test. I'm

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going to tell you about all six of the elements of that test. I won't take a lot of time. But I want to tell you about -- one of the first elements of that test is the usefulness and desirability of the product, the usefulness and desirability of the product. And I submit to you, ladies and gentlemen of the jury, the issue there is who gets to the decide the usefulness and desirability of the product? Who decides that? Is it Mrs. Kay Nunnally after she lost her husband, or is it Joe Nunnally and society before his death?

Joe Nunnally had the right to choose to use that product. He chose, and I submit to you, members of the jury, that's exactly the way it ought to be. It ought not be Kay Nunnally after the death of her husband. Joe Nunnally decided. Joe Nunnally for reasons all his own, decided he wanted to smoke. Who are we to judge when somebody chews tobacco? When they drink a beer, when they dip snuff, when they do a lot of things we find disgusting. Some of those things I find disgusting, I won't say all of them. When they do something like that, who are we to judge? Are you going to judge and say whoops, nope, you can't do that. That's not your right. I submit to you that's not the way this country works.

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Let me tell you one other thing about this issue who gets to decide. Congress has decided. Congress has decided. Society has decided that the utility outweighs the risk. Society has made that judgment.

In 1966 when Congress decided not to outlaw cigarettes, the Congress made the decision about the risk versus the utility.

Now, Mr. Merkel talks about another -- I said he talked about one, he talked about another. I misspoke. The safety aspects of the products. And he gives you statistics of 400,000 deaths. And I hope as we go along in this trial that you will listen carefully when somebody, me included, gives you a statistic.

Because this business of 400,000 deaths, it is not based on actual deaths. It is not based on death certificates. It is not based on medical records. It is based on statistics. And a complex mathematical formula that I, quite frankly, don't have a clue as to understanding, but it's not based on actual deaths or hard evidence.

Now, what he doesn't tell you, though. And I'll give you the statistics, and you can take them or leave them, but I think they're valid. There are other things he doesn't say. The average

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age of death of a nonsmoker is approximately 78 years of age. The average age of death for a lifetime smoker is approximately 70 years of age. Thus what we're talking about is premature death or lost years which is not insignificant now, don't

misunderstand me. But as First Corinthians says, "The last enemy is death." So what we're talking about is a premature death.

Now, he doesn't tell you that 90 percent of smokers don't get lung cancer. 90 percent of smokers don't get lung a cancer. And as we go along in this trial, I don't think that will be disputed. I think Dr. Burns, the Plaintiffs' expert, will concede that. 10 percent of lung cancers occur in nonsmokers. 10 percent of lung cancers occur in nonsmokers. So you cannot smoke your whole life and get lung cancer. Or you can smoke your whole life and not get lung cancer. In fairness to you, the likelihood of getting lung cancer are greater if you do smoke than if you don't smoke. Nobody can contest that. Now, he didn't tell you that 30 to 35 percent of all cancers are due to diet. That hundreds of thousands of people each year die from lack of exercise. That 300,000 people a year according to the Surgeon General die from diet and

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exercise.

Alcohol, 15 million people meet the criteria for alcohol abuse, alcohol dependence or both. These are other statistics that I think you're entitled to consider as you consider the safety aspects of the products, of the risk utility of this product.

Now, and finally, we aren't dealing -- when he talks about the 400,000 deaths, he's not talking about R. J. Reynolds cigarettes. He's talking about all cigarettes by all manufacturers. He's certainly not talking about Salem, which is the primary brand, or Salem Lights which Mr. Nunnally smoked. He's not talking about lung cancer. Now, another factor that you can consider, we talked about two, is the availability of a substitute product. Is there a substitute product which would meet the same needs? And the Plaintiff concedes there is not. You'll see requests for admissions when we get to the side of our case where they've admitted that there is no available substitute product.

Another factor you consider is our ability to eliminate the unsafe characteristics of the product without impairing its usefulness. In

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other words, do we have the ability to eliminate the unsafe characteristics of the product without impairing its usefulness. They can see that we do not, there is no feasible alternative design. The other factor he didn't mention to you is the ability of the user to avoid danger by the exercise of reasonable care.

So what could Joe Nunnally have done to have avoided this? He could have quit. He could have not started or he could have smoked less, members of the jury. If you accept the Plaintiffs' proof that Joe Nunnally smoked three packs of cigarettes everyday, that's 60 cigarettes. That's smoking 10 hours out of everyday, approximately. I haven't timed it, but somewhere in that range. If I ate M&Ms for 10 hours out of everyday, members of

the jury, that would be -- that would not be good. But he's smoking 10 hours.

Finally, the fact that you consider is his awareness of the dangers inherent in the product. And we submit there is no dispute about that. Now, the final topic I want to talk to you about, and I don't want to wear you out. But I do want to give you information. I do want to provide information to you where you can make a judgment in

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this case. I want to talk about the medical, the tumors that were found in Joe Nunnally. Now, in -- in your right lung you have three lobes. In your left lung, you have two, I'm told. I believe that to be so.

Joe Nunnally's cancer was located in his right lung. In his right upper lobe, the upper third of the lung, he had a tumor that was the size of a grapefruit. It was about 15 centimeters, about the size, probably, of my fist. Not only did he have that tumor in his right upper lobe. But he had another tumor in the right upper lobe. It was much smaller than that, probably the size of a nickel or so. Unfortunately, nobody ever looked at that tumor, never removed it. So we don't -- nobody knows, really, anything about that tumor there.

Now, finally, in his middle lobe in his right lung, he had a tumor that was about the size of a ping pong ball, maybe a little bit smaller than that, but about that shape. He had three tumors, this large mass in right upper lobe, he had a smaller mass in right upper lobe, and he another mass in middle lobe.

So the question you're going to have to decide is what caused that cancer? Was it a

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squamous cell carcinoma as the Plaintiff contends, or was it something else? Now, Mr. Merkel didn't give us much credit. He said they the won't tell you what it was. I'll tell you what it was. It was a sarcoma. It was not squamous cell carcinoma. It was a sarcoma. And we're going to bring doctors in here, and proof in here and prove to you that it was not a squamous cell carcinoma. But it was a sarcoma.

You're fair in asking why do you say that? What proof do you have that it was a sarcoma? And the proof that we have that it was a sarcoma is its very size. Squamous cell carcinomas just don't get that big, and the patient still be alive. Squamous cell carcinomas are very aggressive. And you don't live with a squamous cell carcinoma that is 15 centimeters.

Its size is consistent with a sarcoma which is a connective tissue type cancer. Its shape is and consistent with a sarcoma, not a squamous cell carcinoma. The shape of this tumor as you're going to see from the x-rays is very round. It is not spiculated. Y'all all know what a gum ball after of a sweet gum tree looks like with the little spickles and spines on it. A squamous cell

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carcinoma has that appearance. It's spiculated.

This tumor you're going to see is very round in its shape. So its size and its shape tells us it's not what they say it is.

Maybe the most important factor of you will, y'all, is that in your lungs, in this cavity right here where your lungs are housed, there are lymph nodes. And they're located immediately adjacent to this large tumor that was in his right upper lobe. And if you have a squamous cell carcinoma, the first thing it does is infect or invade these lymph nodes that are located right adjacent to it. But the proof is going to show in this case, that the nodes, the lymph nodes were not involved at all. Again, telling us and telling the medical doctors that this was not a squamous cell carcinoma.

We're going to bring in pathologists. They say he's from long way away, well, he used to live right here in Mississippi. That's looked at the cells, the individual cells, under a microscope. And he will tell you that the cells, the -- a minute ago I talked to you about the shape of the tumor. Now I'm talking about the individual cells that you can't see with your eyes, but you have to see under

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a microscope. We're going to bring a pathologist in, a forensic pathologist, who will say that the cells do not look like a squamous cell carcinoma. The direction of growth is wrong for a squamous cell carcinoma. This tumor appears to start in the periphery and grow towards the center. A squamous cell carcinoma where things go into the bronchial tree grows from the inside out, not the outside in. The direction of growth is wrong for a squamous cell carcinoma.

The consulting pulmonologist in Memphis, not anybody we hired, Mr. Merkel is proud of the Memphis doctors, as he should be. I'm sure they're fine doctors. The consulting pulmonologist in Memphis, let me show you what he said in his report. Mr. Nunnally was in the hospital in November the 22nd of 1988. He had been there for a day or two, and the treating doctor wanted him to see a pulmonologist.

A pulmonologist is someone who specializes in chest injury or chest disease. And the pulmonologist, Dr. Blythe, said it was his impression this is probably, not it may be or it could be, this is probably a sarcomatous legion or a lymphoma. I would think he would be more ill, if

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this were an infectious process and would be unusual for bronchogenic carcinoma to be this large at presentation, along -- although with his heavy smoking history, this is still a consideration.

So the pulmonologist when he saw it, thought it was probably a sarcomatous lesion or lymphoma. He did not say a word about squamous cell carcinoma, and he, too, noted that if it was a infectious process. In other words a squamous cell carcinoma, it would be unusual for it to be this large at presentation. So he's told you the same things I've told you. The size, the shape, the

appearance tells him that this is more likely than not a sarcomatous lesion.

Now, finally, at Methodist in Memphis on -- let's see if I can see a date on here. Yeah, the same day, 11/21/88 or 11/22/88, I'm not sure which. But anyway, y'all all know what a radiologist is. They're experts in reading x-rays, and CT scans and things of that nature. The radiologist, a gentleman named Dr. Routt, wrote in his report that "The large right upper lobe mass with two smaller right lung masses as described. This mass does not have the typical appearance or presentation of bronchogenic carcinoma and the

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possibility of a squamous cell lesion is to be considered." So the pulmonologist thought it was more likely than not a sarcomatous lesion. The radiologist thought that more likely than not it was a sarcomatous lesion.

Now, there is proof from the pathologist at Methodist in Memphis. He looked at the cells, and he said well, I think it's a squamous cell carcinoma, and that was the end of it. He made that report. Mr. Merkel read you those records. But we submit to you what we've got is a sarcoma and not a squamous cell carcinoma which is the large tumor in Mr. Nunnally's lung.

Now, finally, let me talk to you quickly about -- I told you there was a tumor in the right middle lobe. And you'll hear evidence about that from our doctors. And the issue here, members of the jury, is where did this right middle lobe tumor come from? Did it come from the large tumor in the upper lobe? In other words, did it metastasize? That's a big word, but all it means is something leaves one place and goes to another. It finds another home. Metastasis is what that means.

Did it metastasize from that tumor down to the middle lobe or did it come from somewhere

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else? And we're going to prove to you it came from somewhere else, although I don't think this issue is dispositive for either side. But if you look at the tumor in the right middle lobe, its size and shape appears to be a metastasis from somewhere else.

But maybe the most important thing about this, y'all, again, a doctor that had nothing to do with R. J. Reynolds or this case, a doctor out at M. D. Anderson named Alpert, she's a pathologist. Pathologists can stain materials, a tissue. And if they stain one way, it tells them something, if they stain another way, it tells them something. She took stains of the large tumor. And she did stains of the smaller tumor in the right middle lobe, and they stain differently.

Now, what that generally means, if they stain differently is they're different. They have a different sight of origin. And the site of origin that we will show you is that there appears to be a growth in the tail of the pancreas as which is a potential source of that metastasis. You know what a metastasis, it moved from the tail of the pancreas. It breaks off like a little embolism or

blood clot, the cancer does, that's one of the features of cancer. It can get in the blood system

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and travel and lodge itself and grow there. And that's bad. And when that occurs, the prognosis is never very good.

But the reason that you find so many lung cancers in your lungs is that your entire blood supply passes through your lungs every few hours. All of your blood, everything in your blood passes through your lungs, and it's a very rich environment. There's a lot of blood. There's a lot of oxygen in there. It's like throwing a seed on a freshly plowed field that's been fertilized. It's a fertile place for things to grow. We submit to you, contrary to what the Plaintiffs said, the large mass is a sarcomatous lesions, and sarcomatous lesions are not associated with smoking. There'll be no dispute about that, I don't believe.

Dr. Burns has testified before, and that's the Plaintiffs' expert, again, that sarcomatous lesions have no known association with smoking. So we're going to prove to you that the lesion that was found in the right upper lobe was not associated with cigarette smoking. Now so that I don't exhaust you before we get started. Let me close and just reiterate just a couple of things that I'd like for you to think about as we go

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through the trial.

The first thing is this that Joe Nunnally started to smoke because he wanted to smoke. We didn't trick him into smoking. There's no claim like this in this case. He continued to smoke, members of the jury, because his wife said he loved it. That's the reason he continued to smoke. We're going to prove that he was aware of the risks of smoking. You've seen the warnings. We'll put on other proof of his awareness of these risks.

He -- he, Joe Nunnally, chose not to quit. He chose not to quit. If you are properly motivated, and you have the right desire, you can quit if you choose to quit. I believe that will be undisputed as we go along in this case. And the fact that he didn't try to quit doesn't mean that he couldn't quit, members of the jury.

Now, we -- I have demonstrated that Reynolds did all it could do to reduce or eliminate the risks associated with the use of its products. That the tumor in the right upper lobe is a sarcomatous lesion that is not associated with smoking. And that the Plaintiff claims our cigarettes are defective and unreasonably dangerous but does not tell you or us how to make them -- how

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to make them reasonably safe. I think the Plaintiff will be very candid with you, and tell you there's no such thing as a safe cigarette. And Mr. Merkel said we had choices. And I guess the choice he wants to give us is go out of business. That's not a fair choice. It's a legal product. We have the right to sell it as long as when put the warning that's mandated by Congress on there.

So where we are, I'll go back to where I started. We're being sued for selling a lawful product with an adequate warning with inherent but known risks for which there's no feasible alternative design. Now, we go through life, y'all, we go through life making choices and picking paths. Everyone of you know that. I've picked some bad ones along the way. But we have the right to choose. That's fundamental to our society.

Mr. Nunnally, he chose to smoke, no one made him.

MR. MERKEL: Excuse me, Mr. Ulmer. Your Honor, I think that's simply argument and not comment on what the evidence might be expected to be.

JUDGE CARLSON: Overrule the objection.

MR. ULMER: I'm almost done, Your Honor.

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Thank you. He chose to smoke. And he chose not to quit, and nobody made him do it. So I go back, and I say to you that the right to choose is the very essence of our society and our world that we live in. I submit to you, members of the jury, that R. J. Reynolds Tobacco Company is not liable for the death of Mr. Joe Nunnally and respectfully ask when you've heard all the evidence to return a verdict for Reynolds, and I implore you to -- to wait until the Plaintiff is through and to listen to all of the evidence.

Because as I said earlier, I can't -- I can't call a witness. I can't do anything to put on proof until the Plaintiff gets through. And so I ask each one of you to do that, and I think when you do that, when you hear all the evidence, you will conclude that R. J. Reynolds is not liable for the death of Joe Nunnally. Thank you very much for your patience.

JUDGE CARLSON: All right. Ladies and gentlemen, we're ready now to begin the presentation of the evidence, but you've been in place for about an hour and 20 or 25 minutes. Let's go ahead and take about a 10 or 15 minute break, try to keep it that would 10, but let you stretch, and we'll start

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back in about 10 minutes.

(Jury exits courtroom.)

(A short break was taken.)

JUDGE CARLSON: Plaintiff may go forward.

MR. MERKEL: We call Dr. David Burns.

MR. ULMER: Your Honor, has the rule been invoked?

JUDGE CARLSON: Yes, sir.

MR. ULMER: It has been invoked?

JUDGE CARLSON: Yes, sir. The clerk needs to swear you in, please, sir.

DAVID BURNS, M.D.,

having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION BY MR. MERKEL:

MR. MERKEL: Proceed, Your Honor?

JUDGE CARLSON: Yes, sir.

Q. (By Mr. Merkel) Dr. Burns, would you identify yourself, please, for the Court and for the

jury?
A. Yes. I'm David Burns. I'm a professor of medicine and physician at the University of California, San Diego School of Medicine.
Q. Would you give us the benefit, Doctor, of your formal education and background and training?

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A. All right. I graduated from Boston College, then went to Dartmoth Medical School for two years. I completed my doctorate in medicine at Harvard Medical School. I then trained for two years as an intern and resident on Harvard Medical Service in Boston City Hospital in internal medicine. I then spent two years in the public health service with the National Clearing House for Smoking and Health.
Following that, I spent three years in San Diego training in chest medicine. That's a subspecialty of internal medicine that exams all the diseases within the chest. Following that, I joined the faculty at UCSC where I received an accelerated promotion to associate professor and have been a professor of medicine now for about 10 years.
Q. From the standpoint, Doctor, of your specialties, are you board certified in any fields?
A. Yes. I am board certified in internal medicine, in pulmonary medicine, and I have a certificate of special accomplishment in critical care medicine.
Q. Would you very briefly distinguish those for the jury, what each deals with and briefly what it means to be board certified?

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A. Certainly.
JUDGE CARLSON: Excuse me, Doctor Burns, excuse me just a moment. Do we have no PA system at all?
MR. MERKEL: The witness's is not, either.
JUDGE CARLSON: I know this one is not. Excuse me, Dr. Burns. I just wanted to make sure it was working.
A. Have to be careful with the first words here with the new PA system. Medicine in general, for the care delivery arms divides up into four areas, pediatrics, obstetrics and gynecology. Surgery, where you operate on people, and medicine where you take care of diseases that are nonoperative in nature.
So I trained in internal medicine which specializes in all of the diseases of the body that are other than surgical, pediatric or obstetrical, gynecologic types of procedures. You spend time training, after you've completed a requisite training, you're allowed to sit for an examination, detailed two-day exam where you take all kinds of questions. Having passed that exam and having completed all of that training, you are then board

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certified in internal medicine.
After being board certified in internal medicine, if you have completed additional training, and in this case, it was three years of additional

training, in a subspecialty. There are multiple subspecialties often along organ systems, and the one that I chose was the lungs. You complete that training. Sit for another examination, and having passed that examination, you are then board certified in pulmonary medicine as a subspecialty of internal medicine.

One of the things that we do a great deal of in pulmonary medicine is take care of patients who are critically ill in the intensive care unit. And for approximately 18 or 19 years of my career, I did that extensively. And so I also sat for and completed the examination for that as a special certification of your pulmonary subspecialty and, therefore, have a certificate of special accomplishment in critical care medicine.

Q. (By Mr. Merkel) You mentioned, Dr. Burns, the critical care, 19 years of experience there. Would you just, in general, tell the jury what your practice, your clinical practice has consisted of from the time you completed your first

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block of formal training and became a practicing doctor?

A. Well, my practice has been within the university. It has been an inpatient practice, and there have been two components to it. One has been to be the primary care physician within the intensive care unit. That is the physician responsible for all of the care provided to that patient. That was the medical intensive care unit where we see patients with lung disease, with heart disease, with kidney disease, with infections, with a variety of different types of problems.

The other area that I spent a fair amount of time in clinically was on the consultative service in lung disease. Where if someone is in the hospital and has a problem with their lungs that the doctor that is providing the primary care need some extra help on. They would ask us to come see that patient and provide them advice about how to make the diagnosis, what kinds of diagnoses might be considered and how to treat that individual patient.

Q. And briefly, Doctor, in a clinical practice like that, dealing with lung diseases, the diagnostic process of lung diseases --

JUDGE CARLSON: Excuse me, Mr. Merkel.

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Mr. Merkel, excuse me. We need to cut that out. We've got to hold Court here. All right.

Q. (By Mr. Merkel) Would you explain to the jury how the different specialties that are involved in diagnosing lung problems come together and complement each other and work together. In other words, radiologists, pulmonologists, pathologists and the things that go into a diagnosis?

A. Yes. I mean, the standard way you teach a medical student to deal with the problem is standard throughout all specialties of medicine. What happens is somebody comes in, and you listen to them. Sometimes we don't listen as well as we might. But that's a critical part of getting information. You ask and receive information, and

the patient volunteers information. What are they complaining of, what kind of symptoms do they have, how long have they had those symptoms, have they changed over time, have they gotten better, have they gotten worse, where are they? And then based on that, you order a set of tests. Okay, and they, in general, are tests to see what's there. There'll be x-rays, there'll be laboratory data.

So you get back a picture -- I'm sorry, you get back a picture on the x-rays. And now you

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know, anatomically, that something's there. So based on your history and your examination of that patient, and now this anatomic picture, you say there's something wrong, in Mr. Nunnally's case, in the lung. You can see in the right upper part of the lung a big mass on the x-ray.

And so you say, "Well, what kinds of things can cause that?" And there are lots of kinds of things that can cause it. So you write them down. And then you do additional tests to find out specifically what's the cause of that abnormality. Because you can't treat everything all at once. You can't say, "Well, it might be infection, it might be cancer, it might be something else." You have to make a diagnosis.

So you go and -- usually you get a sample of the material, and particularly with cancers. You get a biopsy, and you look at it, and then you decide whether you have enough information to make a diagnosis, make a clinical diagnosis with enough certainty to go and treat that individual patient. Once you have done that you know, medically, what the diagnosis is. And you can bring to bear all of the information we have and in all of the studies that describe how that diagnosis gets treated. And

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so it's very important to make a diagnosis, and that's what we do clinically.

We don't do it from the first guess on the x-ray. We do it after all of the information has been obtained. Because that's the a pretty serious decision, because that decision is going to define what treatments are available? What the prognosis is for that patient? And how you can manage that individual disease.

Q. Relating back to the documents that were shown the jury on opening statements by the respective parties, Dr. Burns, Mr. Ulmer showed some documents that referred to a possible sarcomatous mass and one that said probable need to check but can't rule out. Are you familiar -- I haven't gone that far yet, but while we're on that subject so we won't waste more time, are you familiar with Mr. Nunnally's medical records?

A. I am.

Q. And the records that both I showed the jury and Mr. Ulmer showed the jury?

A. Yes, I am.

Q. Would you explain been to the jury what -- where in the process that you've just told us about both of those records arose and came about

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and what his sarcomatous lesion was being referenced to and where we went from there, if you'd explain that for the jury.

A. That occurred at the time of the process, when he came in having lost weight, feeling sick, and they got the x-ray. When you get a x-ray that's abnormal, one of the things that the radiologist should do is say, "These are the kinds of things it might be." The doctor taking care of the patient, the pulmonologist will come in and look at that x-ray and say these are the kinds of things that they might be. And I'll tell you from my own experience with a 37-year-old man, you often hope for things that are treatable, like lymphoma, rather than things that have a dismal outcome, like lung cancer.

And so you're guessing what might be the cause of what's on that x-ray. You then go about finding out that answer. You go and take a biopsy of that tissue, and then you look at that biopsy, and if you don't know -- and sometimes you don't, sometimes there's not enough information on that biopsy to know -- you say I don't know. We can't tell from this biopsy. Because one of the worst things that you can do as a pathologist or as a

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clinician is to go off treating the wrong disease, and so we take it very seriously. People look at the slides, they make a serious judgment, and they reach an answer.

They say this is what this disease is. And once they make that decision, then all of the information that we have about how you manage that specific disease can be brought to bear to help that individual.

So the fact that at the start of the process you say well, you know, it could be infection, it could be sarcoma, it could be lymphoma, it could be lung cancer, doesn't mean that at the end of the process after you get the tissue still think, well, it might be a sarcoma, or it might be a lymphoma.

After you get the tissue, you make a diagnosis. And the clinicians taking care of this man made that diagnosis and made that diagnosis in a way that allowed treatment and did treatment that you would not do for cancers that came from other parts of the body to the lung. So they were certain and I am certain that this gentleman had lung cancer.

MR. ULMER: Your Honor, before he gives

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opinion testimony, I would hope that maybe he would be further qualified and then tendered for voir dire.

JUDGE CARLSON: There's a request to voir dire, you do need to voir dire, so counsel opposite can voir dire.

MR. MERKEL: We can certainly do that, Your Honor. I thought basic medicine, we wouldn't. We'll come back to this, Dr. Burns.

A. Okay.

Q. (By Mr. Merkel) Finish up in a moment.

We'll go ahead with your qualifications first. Are you a member, Dr. Burns, of any medical societies?

A. Yes. I am a member of several medical societies. American Thoracic Society, American College of Chest Physicians, a variety of other organizations.

Q. And what is the American Society of Clinical Research?

A. That's a society of physicians, often physicians in academic practice that are interested in investigative medicine, and answering questions that haven't been answered yet and doing research.

Q. In addition to your clinical practice, Doctor, have you had -- performed service in the

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field of public health?

A. Yes, I have. I've spent a substantial part of my career, and currently most of my time in the area of public health, and specifically in the area of tobacco and public health.

Q. Would you tell the jury how you got involved in that, and then just in your own words describe for them what you've done in this area. And what your association with research and reports in the area of smoking and health have been?

A. Yes. I've spent an enormous part of my career in public health. It began when I joined the Public Health Service in 1975 as a medical officer with the National Clearing House for Smoking and Health.

That organization produces the Surgeon General's report, and part of my job was to write the 1975 Surgeon General's report on smoking and health. I also put together the 1976 report while I was there.

Subsequent to that, I went to California, an as I told you. And when the Office on Smoking and Health was created in Washington, D.C., in 1978, they asked me to come back and help them edit and produce the 1979 Surgeon General's report. Some of

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you may have seen that. That's a volume about this thick (indicating) that details all of the knowledge that we had at that time about smoking and health.

Since that time, I've been an author, editor or senior reviewer of every Surgeon General's report that has been produced from 1975 through date, through the current date, including ones that are currently in production.

From -- for the last 10 or 15 years, I have been also involved with the National Cancer Institute producing a series of monographs on tobacco control the issues. They range from issues like the disease consequences of cigars to issues of what clinicians can do in their offices to help patients quit, to issues of larger social influences on tobacco.

I've also worked with the National Cancer Institute to help them design their study called the commit study which was a study of how you could activate communities to try to help those communities deal with tobacco as an issue.

I've been a consultant to the

Environmental Protection Agency, the American Cancer Society nationally, locally and at the state level, the American Lung Association, nationally, locally

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and at the state level, and to a variety of other organizations that are interested in tobacco control.

I've also submitted and obtained research grants to specifically study issues on tobacco, including issues that relate to tobacco advertising, changes in tobacco behavior and also the risks associated with tobacco use.

Q. In working with these various governmental and public health bodies to publish Surgeon General's reports, and edit them and things of that nature, has a part of your work involved gathering, reading and assimilating historical data, and reports and information concerning smoking and health, Dr. Burns?

A. Yes. A big part of understanding the science on an issue is to look backwards in time, both in terms of the scientific studies that have been published, but also in an area like tobacco. What has happened, over time, to the product? How has it changed, how, as the growth of cigarettes as a product developed over this century. There's a lot of work that we have done looking backwards in time about what people knew, about how people used the product. Differences the between men and women,

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blacks and whites in how products are used. There's a variety of different answers to questions that need an examination of the past, in order to know where we stand currently.

It's often been said that those who ignore history have to repeat it. And that's because there's a great deal of information to be learned, both scientifically and intellectually from examining what has happened in the past, and we've done that extensively in the process of preparing Surgeon General's reports and preparing tobacco control monographs and also in my own publications.

Q. In your work, Doctor, in the area of smoking and health, have you had an occasion to examine and have available to you Reynolds -- internal R. J. Reynolds documents indicating their experiments, and their studies, and analysis of their products, and their uses and things of that nature?

A. Well, the answer to your question is yes and no. For much of the time that we were doing Surgeon General's reports, that information wasn't available to us. The information on what they knew or what they knew about their own products wasn't available. More recently that --

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MR. ULMER: Your Honor, we object to that. This has no relevancy to this case.

JUDGE CARLSON: Well, I think the question was whether or not he had reference to the internal documents of Reynolds. He may not be exactly responsive, but I'll -- the question is appropriate but --

MR. ULMER: I'm going to move this where I can see the Court. I'm sorry.
JUDGE CARLSON: Yes, sir. That particular question, may the question be asked again, Mr. Merkel, and let him respond to it.
Q. (By Mr. Merkel) Basically, Doctor, you were telling us what you had had access to and how, and if you would respond to that. And I'm talking about Reynolds documents of their the research, their studies, their changes in the product, what effect, if any, that had, these types of documents.
A. Yes. Over the last several years, those documents have become available. And we have examined them extensively, because there's a large body of evidence that exists in those documents that we did not have access to before.
Q. Okay. And in studying or reaching conclusions such as the Surgeon General's reports

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do, is the entire body of knowledge necessary to -- to get the complete picture on something, doctor?
MR. ULMER: Your Honor, this is not relevant to any issue in this case. The issue is what caused Joe Nunnally's cancer, not what was or was not available to the Surgeon General in '64 or any other year. It's not relevant. We object.
MR. MERKEL: Your Honor, at this time, I was trying to qualify the witness as to what information he has, what he knows, how he has come by historical information.
JUDGE CARLSON: Yes, sir. I'll overrule the objection. And certainly the bases for any opinions or what data and information he may have available, whether or not they'd be admissible is another issue.
Q. (By Mr. Merkel) Thank you, Your Honor. Dr. Burns?
A. Could you ask your question again? I want to be sure I'm specific in my answer.
Q. What I'm asking is the role of obtaining internal documents like Reynolds' studies and things they may have done to change their product one way or another, and then the results of those changes, is that something that in publishing a public health

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report such as the Surgeon General's report would need to be complete and full compilation of what information was out there?
A. Yes. The process of preparing a Surgeon General's report is to look at everything that's available on a given topic. You then synthesize all of that information into a document that reaches certain judgments.
You send that document out widely to experts throughout the United States, and ask them whether you've done that right. Whether it's accurate. Whether you've left anything out.
Those responses come back, you change it based on those responses and then send the whole document out to another large group of people who are experts in public health. And again, you ask them did we do this right? Is the balance, and the tone and the accuracy of this document correct? You

get back their comments and include it. You then submit that document to each agency of the public health service and ask them to formally review it.

It then goes to the Surgeon General, the Secretary of Health and Human Services. And then it's submitted to Congress as the official position of the U.S. Public Health Service.

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So yes, the goal is to get as much information as possible to be brought to bear on a given topic.

Q. Does information concerning the existence of carcinogens that may have been identified in tobacco smoke and tar, is that a factor that the public health service would have been looking for and interested in during the compilation of these reports?

A. Absolutely. One of the very early investigations that went on immediately after the studies where they painted the tar on mice was to find out which of the several thousand chemicals in that tar caused cancer. So there was an active investigation to find out what was in that tobacco smoke? What chemicals were present there? And then to find out what the consequences of exposure to those chemicals were, particularly consequences in relation to cancer that would define whether or not these chemicals were carcinogens, cancer-causing substances.

Q. And in preparing Surgeon General's reports and studying the public health question dealing with smoking and health, is the usage intended or being made of the product, the practices

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of the public in consuming it or using it, in frequency of use, onset of use, duration of use, those types of things, are they something you studied and incorporated in those reports?

A. Absolutely. We studied them from several perspectives. One from the perspective of how much it takes to cause risk, and whether the risk is clear and truly caused by the behavior, itself. And then, secondly, when you try to help people quit. Many aspects of that behavior define people are going to have more difficulty quitting and allow you to change somewhat your approaches to individual patients that you're trying to help quit.

So both sides, both in terms of defining the risks and in terms of trying to find ways to treat people who are addictive, require an understanding of smoking behavior in order to integrate the behavior into the risk and the treatment.

Q. And are company documents concerning the behavior of smokers, the onsets, the durations, the reasons or the motivations for smoking, are those things that you dealt with and incorporated into your reports?

A. In recent reports, yes.

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Q. And is that information valuable to reach conclusions about the question of smoking and health?

A. Yes.
Q. From the standpoint of addictive agents that may be present in tobacco that would account for the behavior of the smoking behavior and its duration, have you studied that area of the equation?
A. Yes, I have. The 1988 Surgeon General's report was devoted entirely to some 7 or 800-page document. It was devoted entirely to the question of nicotine addiction. Smoking as an addictive behavior. And they concluded that smoking was addictive, and the addictive agent was nicotine. So yes, I've been extensively aware of it, involved in it, participating in the review of that information.
Q. Okay.
MR. MERKEL: Your Honor, we would tender Dr. Burns as an expert in the fields of medicine and also health and smoking, public health and smoking type issues, including historical documents, nicotine addiction, usage and habitual usage and characteristics of the public in using the product.
JUDGE CARLSON: All right. Mr. Ulmer,

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voir dire.
VOIR DIRE EXAMINATION BY MR. ULMER:
Q. Hello, Dr. Burns.
A. How are you?
Q. Fine, sir. I have a few questions for you. I don't think a great many questions, with respect to your -- your qualifications. And maybe I don't need to ask this. You weren't tendered in the area of cigarette design, but you've never manufactured or designed a cigarette?
A. No, I've not.
Q. And you've had no training or experience in the design or manufacture of cigarettes?
A. I've had considerable training in evaluating the consequences of changes in cigarette design. And in interpreting chance changes in cigarette design and their effect on delivery of tar and nicotine to people and to machines. But I've never designed a cigarette for a cigarette manufacturer, nor participated in that design for a cigarette manufacturer.
Q. And do you remember the "Rogers" case?
A. Yes.
Q. Did you testify in "Rogers" that you have no training or experience in the design or

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manufacture of cigarettes?
A. That's correct.
Q. Okay.
A. I've not designed or manufactured a cigarette.
Q. Okay.
A. I have extensively studied the consequences of those design changes.
Q. And you were deposed in this case, and you were asked if you knew, for instance, the pH of Salem or Doral, and you did not.
A. I don't have that information specific to those products, that's correct.
Q. And the same thing with respect to the

tar and nicotine makeup of Salem and Doral, same answer?
A. That's correct. That information is readily available. I just don't have it by memory.
Q. But you do, in fairness to you, claim general knowledge with respect to cigarette design, but you don't know specifically how it applies to Salem or Doral?
A. I don't have a specific knowledge of the manufacturing of Salem or Doral. I know generally the consequences of the design changes that have

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been implemented over the last four years by tobacco companies.
Q. And you don't know with respect to Salem or Doral anything about pH, whether it went up or down historically, anything of that nature, do you?
A. No, I've not studied the pH of Salem or Doral, that's correct.
Q. Just to kind of close this subject, I believe you said in your deposition that you had not conducted a review with respect to the design and manufacture that was specific to Salem or Doral. I think I've quoted you correctly, have I not?
A. That is correct.
Q. Now, you -- you testified to the jury a few minutes ago about looking at the Memphis medical records; did you not?
A. I did.
Q. And you -- you made certain judgments based on looking at those records, I believe.
A. I did.
Q. Now, you have never looked at the actual pathology slides of the tissue that was removed from Joe Nunnally, have you?
A. No, I've not.
Q. I have the pathology slides right here.

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And naturally, you know what these are; do you not?
A. Certainly.
Q. And in your profession, you are a pulmonologist. But you believe that you have the -- the skill and expertise to look at a pathology slide under a microscope and to make certain -- certain judgments?
A. It is commonly our practice with our patients to review the pathology on the individual patient. We don't do the pathology in isolation. And we certainly review the information with a pathologist. But we look at the slides, yes.
Q. But it's your common practice to do that?
A. It's my common practice in those patients for whom I have direct primary care responsibility to do that.
Q. Okay.
A. It is not my practice in those cases that I review for other physicians when they send medical records.
Q. All right. So you are qualified to look at pathology slides and make judgments. But you didn't look at Joe Nunnally's slides?
A. That's correct.
Q. All right. And obviously, so the jury

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can understand the basis for your opinions, or if you have a basis for your opinions on causation in this case, you've not done an independent analysis of the slides to determine cell type?
A. I've not examined the slides in any way.
Q. Okay. And the same thing for the CT scans and the x-rays, you have not actually looked at those, have you?
A. No, I've relied on the interpretations of both the pathology and the x-rays that were made as a part of the clinical record. That's my normal pattern for reviewing external records.
Q. All right. We'll get to that in a minute to see if that is the case. But so the jury understands, you did not look at the actual x-rays, or the CTs or the actual pathology, but you accepted at face value the reports by the physicians?
A. I read the reports by the physicians and integrated them into the clinical care or the clinical pattern of this illness for this individual. And because that all was coherent, I did not feel the need to go and independently examine the chest x-rays or the pathology.
Q. Okay. So to answer my question if we could, you did rely upon the reports that were
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provided to you by the pathologist and by the radiologist?
A. I certainly did, yes.
Q. And you said what your normal practice was. Let me see if I can refresh your memory with something here, and if we need to, I think I can find a transcript. In the "Wilkes" case, you testified in that case?
A. Yes, I did.
Q. And the "Wilkes" case was tried down in, I believe, Greenville, Mississippi.
A. Yes, that was some number of years ago, but yes.
Q. Did you testify in "Wilkes" that it is your practice in these type cases when there is pathology on the chest you try to review those chest x-rays? Did you give that testimony in "Wilkes"?
A. I probably did, yes.
Q. And in "Wilkes" further -- and I can give you the page number, but I'll try to quote it exactly, you said, I believe, in "Wilkes", under oath "That you typically ask for the chest x-rays, because you are a chest physician, and it is very useful to you in considering the case to look at all the evidence, and the evidence you prefer to look at
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directly includes the chest x-rays."
A. Yes. In those instances where the information on the chest x-ray is critical to making the diagnosis or is in question, then I would review those x-rays myself. If there was a question about whether the tumor was located in the chest or not. If there was a question of whether there was metastatic disease, then yes, I would review those chest x-rays myself. When the pattern of disease is consistent with what is evident on the chest x-ray.

And where a review of the chest x-ray would not add any new information to my review of the case, then I don't review the x-rays.

Q. Well, you said in "Wilkes", further, under oath, "That you like to make a review of those x-rays rather than simply rely on the radiological interpretation." You did testify to that in "Wilkes", did you not?

A. I did. And if there is a question, I prefer to rely on my own interpretation. If there's not a question, then I'm comfortable relying on the interpretation of the pathologist.

Q. So just so the jury fully understands, you relied upon the reports from the Methodist Hospital, did you not?

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A. I did.

Q. All right. And that's the basis for your opinion?

A. That plus the medical records from the M. D. Anderson Hospital, yes.

Q. Okay. Mr. Dodson, one of the attorneys for Mrs. Nunnally, wrote you several times, I believe, did he not, and offered to provide you with the pathology specimens and the x-ray evidence?

A. Yes, he did.

Q. And Dr. Burns, if -- if someone from outside your hospital or even inside your hospital comes to you and says, "Dr. Burns, I've been treated by this doctor across the street. And I need a second opinion, and I may have lung cancer," are you telling the jury that if you were asked for a second opinion that you would simply rely upon the -- the records of the first treater, or would you want to see the pathology slides and the radiology slides?

MR. MERKEL: Excuse me. Your Honor, I don't think we're in voir dire anymore. I mean, if we're wanting to talk about qualifications or something, that's one thing. This sounds like cross examination of opinions that haven't even been given. We object to it at this point.

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JUDGE CARLSON: At this point, I would overrule the objection.

Q. (By Mr. Ulmer) Could you give the question back?

A. I think I remember the question. It would depend on what the second opinion was in question about. If the second opinion was in question about the pathology, if the patient said, "The pathologist or the physician who's taking care of me is uncertain as to what this is or I am uncomfortable as to whether they are certain as to what the pathology is," then certainly I would obtain that material. I would give it to our pathologists, and I would talk to them about their interpretations of that material.

If that's not in question, if the question is one of management, if the question is one of diagnosis and treatment, then no, I would not normally look at the pathology. That's a -- often a difficult and complex task to arrange. And the only reason I would do that would be if there was a

substantive question that needed to be answered by examining the slides.

Q. Well, aren't you, just so the -- you know, we all know where we are, just basically

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saying, "Amen" to these other physicians rather than making your own independent judgment?

A. I am making a judgment that, from my experience, the pathology that is present in the medical record, the radiology that is present in the medical record is, indeed, consistent with the clinical course of this gentleman's illness and subsequent demise. And that that is all, as a medical record, consistent with reaching a judgment that this gentleman had carcinoma of the lung of the type caused by cigarette smoke.

Q. Now, Dr. Burns, you said that you read those records, and you made certain interpretations of those records. Do you have, so the jury can understand, any special skill or expertise in interpreting records?

A. You mean other than 25 years of experience doing it?

Q. Yeah.

A. I mean --

Q. Have you done any -- what is the -- what I'm getting at is can't any one of us read what a writing says and make a fair interpretation of it if we understand the subject matter?

A. Well, I don't believe that that's true.

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I think that it is difficult for most people who are not familiar with a hospital and the way a hospital works to read a medical record and make sense out of it. There are often statements made at different points in time that appear to be conflicting. There's a variety of different kinds of information that is present in there. And it is an acquired understanding as part of the training of a physician, or a nurse or other individuals who work in those environments to be able to integrate the form in which that information is presented into an understanding of what the -- is actually going on with that patient.

Q. Well --

A. And that takes considerable skill and training to be able to integrate that information.

Q. That's a very long answer. If you feel like you do have special training, you can say yes, if you would like to. Or if you don't, you can say no. Do you feel like you have special training to interpret somebody else's records?

A. Certainly. I spent four years in medical school. I spent five years in postgraduate training, and I've spent 25 years taking care of patients. All of which have trained me specially

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under direction as part of the gaining of my knowledge and understanding to interpret medical records accurately. And that's a very difficult thing to do for people who haven't been through the process of understanding those records.

Q. So I think that's a yes? Yes?

A. Yes, that's a yes.
Q. Thank you. Are you a psychiatrist?
A. I'm not a psychiatrist.
Q. Are you a psychologist?
A. I'm not a psychologist.
Q. Are you a pharmacologist?
A. I'm not a pharmacologist. All of those skills are bodies of knowledge or intrinsic practice of medicine. But I don't hold myself out as an individual who has specifically been trained to exclusively practice any one of those disciplines.
Q. You've had no formal training in "addiction," have you?
A. No, that's not correct. I've been trained formally in addiction as part of my medical school training. It's a major part of internal medicine. It's also a major part of taking care of patients in the intensive care unit. I've not taken a formal course that has led to certification that

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has the title of addiction in it.
Q. Well, the reason I ask you that question is in a case that was in the province of Quebec --
A. That's correct.
Q. -- the Canadian "Advan" case, at page 4979 of the transcript, you were asked, "Question: I haven't asked you about the Surgeon General's report. I've looked at your curriculum vitae. Have you had any formal training in addiction?" And your answer was: "I have not had formal training in addiction, no." So is that accurate, you've had no formal training in addiction?
A. I am familiar with your use of that transcript in previous trials. What I've done is try to make it clear to the jury what experience I have had, which is my training in medicine, training to treat people in intensive care unit. A large part of which involves managing people with addictions. And what training I have not had, which is I've not gone to a specific study of addiction, I've not taken specific course work.
I've not gone to spend a year or two training specifically in addiction. I don't have a formal degree in addiction. I've a formal degree in medicine, which covers that responsibility. But I

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don't have a formal degree in addiction, and what I'm trying to do is simply make it clear so everyone understands what training I've had, and what training I have not had.
Q. Did you -- were you asked that question, and did you give that answer in the Canadian "Advan" case?
A. I was asked that question. I gave that answer. And I have now clarified exactly what my training is.
Q. Now, have you seen any medical records on any treatment for Joe Nunnally with respect to his smoking behavior, habit, dependence or addiction?
A. No, I've not.
MR. ULMER: Your Honor, we -- we don't contest that Dr. Burns is qualified in the field of pulmonology, to give opinion testimony in that

field. I know that he's more than adequately qualified in that field. Provided that he has a sufficient factual predicate to do so. And not having seen the actual pathology, the radiology, he does nothing more than say Amen to other physicians.

And we don't think his testimony in that field is helpful to the jury. So we object to him giving opinion testimony as for that area. As far

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as smoking behavior, addiction, habit or whatever you call it, we object to him giving opinion testimony in that field. We object to him giving any opinion testimony in the field of cigarette design. I think he's disqualified himself in those fields. So those are our objections. Thank you for the opportunity to voir dire him.

JUDGE CARLSON: Based on the record made and the case law, the Court will allow Dr. Burns to testify, and he will be declared as an expert in the field so offered by Plaintiffs' counsel subject to cross examination.

CONTINUATION OF DIRECT EXAMINATION BY MR. MERKEL:

Q. Dr. Burns, we've been interrupted in it twice, but let's try to get rid of sarcomas, and then we can move on to something else. The physician who was involved that Mr. Ulmer showed the jury a blowup of his testimony that said it possibly was a sarcoma I believe was a pulmonologist, correct?

A. Yes.

Q. Did that pulmonologist the next day, or the next day or sometime in the procedure after they got back the pathology, did he change his opinion and make a diagnosis?

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A. Yes, he diagnosed it as bronchogenic carcinoma.

Q. And what does that do from the medical standpoint much understanding records, if you give a differential diagnosis that says it could be cancer, it could be a headache or it could be sneeze and sniffles, and then you make a diagnosis of cancer, what does that do to the other parts that might have been there three days earlier?

A. It means that you started out with it could be all these things. We need to go get some more information. You get that information, and you say this is what it is. You make a diagnosis. That's what they did in this case. They started out saying well, could be this, could be that. We need more information. We need to get a piece of tissue. They got the piece of tissue. Piece of tissue said this is what it is.

That fit with all the clinical picture of this individual, and they said the diagnosis is bronchogenic carcinoma.

Q. And once that diagnosis was made, did they act in reliance on it and treat the patient appropriately for that diagnosis?

A. They most certainly did. They went on to

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radiate that tumor. To give therapeutic radiation, not a chest x-ray now. This is a very high dose of

radiation that destroys the tissue, ideally destroying more of the cancer tissue than the normal tissue. But it burns the tissue with radiation. They didn't get quite enough shrinkage with that or as much shrinkage as they would like. He subsequently went down to M. D. Anderson Hospital. And because the tumor was so much smaller, they felt they could take it out there. They operated to take that tumor out. Because that was the only way that this man had a chance for cure from a primary lung cancer.

If that were a metastatic lesion, you never would have operated on it. Because it does not allow you to cure the patient. And it is a very serious and major surgical procedure. He spent a long time in the hospital doing.

So all of the treatment, subsequently, establishes that all of the physicians who were making those treatment decisions were confident, medically certain that this man had a primary lung cancer, a primary bronchogenic carcinoma of the lung.

Q. And do you, Dr. Burns, from your review

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of the medical records, both at Methodist in Memphis and at M. D. Anderson in Houston, have you reached an opinion as to what the man's lung problem was?

A. Yes, this was a primary bronchogenic carcinoma of the lung.

Q. And have you reached a conclusion as to the cause of that bronchogenic carcinoma of the lung?

A. Yes. The cause of this -- of Mr. Nunnally's bronchogenic carcinoma of the lung was his cigarette smoking.

Q. Okay.

A. Hanging a little lop-sided there.

Q. I said our technology was not going to be that great in this. Now, moving on, Dr. Burns, to why you're here today. Did we contact you, and ask you to review, and study certain materials, and make yourself available to render opinions after you had completed that study?

A. Yes, you did.

Q. Would you tell the jury the things that you have reviewed, and looked at and considered in reaching opinions that you will subsequently give here today?

A. Well, they basically divide into two

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parts. One part is specific to this case. The medical records on this gentleman, the transcripts of depositions from some of the treating physicians, and from his wife, I've reviewed those materials.

The other is that I've spent most of my life training to treat people with lung disease and lung cancer, and I've spent about half of my career involved in great detail reviewing, developing, publishing information on the relationship between cigarette smoking and disease. And defining the causation of disease from the scientific data. And so, therefore, that body of information has great bearing on this individual's case. Where we're

trying to relate his lung cancer to what produced it, cigarette smoking.

Q. Could you explain to the jury, Doctor, in more or less layman's terms, how cigarette smoking causes lung cancer, the mechanism by which this occurs, and why that is?

A. Okay. What I'll try to do is to take you through an understanding of how the cancer gets caused, and what kinds of information we have that make us certain about that.

Probably the place to start is with the smoke. Most of you are familiar that you see smoke

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curling up from a cigarette. What that is is a series of very tiny droplets. And those droplets are of a size that you can ready inhale them, and they'll deposit in the lung.

Inside those droplets, are about 4,000 individual chemicals. When you burn tobacco, you get a very complex mix of chemicals. About 60 of those now have been identified as being part of the carcinogenic process, part of causing cancer.

Some of them have been established in animals. Others have been established as individual chemicals as causing cancer in people.

Well, how does cancer occur? What is cancer? Well, that's -- it's obviously a very complex by logic question, but it's a simple human answer. Cancer is something that doesn't stop growing, it invades. Normally if you cut yourself, the two sides of that skin grow together. When they meet in the middle, they stop growing. That's an important characteristic of those cells. Because otherwise, they'd bump up, and sometimes you see people who have what are called "keloids." Which are scars that bump up, but most of the time it stops. And they stop growing because the two edges of the cell have come together, and they get a

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signal that stops growing. Okay.

A cancer cell has lost that signal. It can't read that signal anymore. And it's gained an additional characteristic that's even more deadly. Which is it's gained the ability to eat away at and invade the tissue around it.

Well, is that a single change, is that like being hit by a bolt of lightning where on one day with one cigarette, for example, Mr. Nunnally suddenly had that change happen? No. We don't understand the entire process of how a cancer is caused. Of all the different steps in that process, but we understand a lot of it. And we know that there are hundreds, perhaps, at least a hundred, perhaps hundreds of small changes that occur.

Each of those changes occur inside the cell, in the nucleus of the cell, in the DNA of the cell. In that part of the cell that is replicating, dividing, producing donor cells. And slowly, over time, Joe Nunnally started at age eight, he inhaled smoke.

Well, what happened to that smoke that he inhaled? Early on, and perhaps I could --

Q. Yes.

A. -- step down?

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MR. MERKEL: Your Honor, may he step down and use the chart?

JUDGE CARLSON: Yes, sir, Dr. Burns.

A. Well, when you inhale into the lung, what happens is you come in through a very large tube, the trachea, into smaller tubes. And those tubes get smaller and smaller and smaller. And ultimately, then, little sacks, called alveoli, okay, and they hang like sort of grapes on the end of a cluster of these tubes through which the air passes. And because of that large grape-like surface.

And there are millions, several hundred millions of these little tiny grapes within your chest. You get a huge surface area, and if you were to spread out that surface, it would cover almost the size of a tennis court. It's really a remarkable accomplishment of engineering by God to build all of this into such a small space. But those clusters are now hanging off these fine tubes. So you inhale the air, it goes down the tubes, gets into the alveoli, gets into the sacks. And you bring blood right next to that air, and a very, very thin sheet allowing the blood to absorb oxygen from the air and give off carbon dioxide. Those being

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the principal functions of the lung, to absorb oxygen and get rid of carbon dioxide.

Well, over time, as we evolved, all of us inhale things into our airways. You know, there's smoke, there's dust. All kinds of stuff that you inhale, wood smoke. A lot of it gets filtered out into your nose. You know when you're out in a dusty environment, you blow your nose. There'll be dust and stuff in there, maybe sawdust, maybe dust from the road. That's because the first defense of your airway is in your nose, and the large particle, like dust particles, wind upcoming in, and they can't make the corner to go down into your lung. They come into your nose, and they bang into the back of your nose and stick there.

And then your body has cilia in there that move them out to the front of your nose to protect you. Well, the same protection exists in the airways, and you can see it here. These are normal airway cells. They are tall, and they have little hairs sitting on top of them, okay. They also have areas that produce a very thin layer of mucus that sits right on top of these little hair-like structures. And those structures beat like that. And they slowly push this layer of fluid

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and mucus from down inside the lung up to the back of your throat. It comes out the back of your throat, and you swallow it or you cough it up, okay. So it protects you.

Any of that dust that's smaller than the big particles of road dust that actually can snake the corner, can follow the air stream and get down in there does deposit on that space. The first layer of protection is they move it along. They

don't get a chance to cause damage.

The second layer of protection is these cells that don't hang around very long. They last about 24 hours, and then they sort of cast off on top of the other cells. Again brought up and swallowed or coughed out, okay.

These cells down here, these little ones, they're the ones that hang around forever and divide and divide and divide making the bigger cells. Bigger cells just like the cells of your skin, okay. You make the cell, it serves its purpose. And then just as your skin flakes off, these cells come off as well. So you have these two layers of protection that protect you from all of the stuff you inhale.

Well, Joe Nunnally started at eight, and he inhaled the cigarette. What was his first

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response? We don't know, but we know what most people's first response was. They cough. Any of you who remember back to trying a cigarette when you were eight, 10, 12, 14-years-old know that the first time you inhaled you likely coughed.

Why is that? Well, the reason why that is is you have irritants in that smoke, not only are they 40 -- there are 60 carcinogens or cancer-causing substances there. But there's also things that are irritating. And when you inhale it, what your body tells you is it's hurting, cough it out. And so you do.

But over time, you adopt to that, and Joe adapted to it. So he could inhale, and those irritants kept coming in, but he didn't cough anymore. How did that happen? Well, your body adapts in a variety of different ways. And after he's been smoking a while, we begin to see one of those adaptations. What happens is these big tall columnar cells with those cilia on them form like a callous, just as you would if you worked hard with your hands. The cells kind of hunker down. They get square, they get cuboidal, form little cubes, and they lose the cilia, not everywhere. But in parts. And now all of a sudden, one of your

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protective layers is gone.

The cilia and the mucus no longer work as well, and that smoke that comes in now sits on top of those cells. It isn't cleaned out anymore. And the cancer-causing substances sit and they can drift down to this layer of cells that's dividing. And slowly, over time, they make changes in the Nuda of that cell, in the DNA of that cell, one change after another. Most of those changes don't make much difference. Some of them actually kill the cell, and the cell dies. But some of them are stable, and go on and moving towards becoming cancer.

When we look at people's lungs who smoke, we see this. And then when we look at people who smoke heavier, we see the next stage, which is the nucleus which had been round and fairly regular. Now, it's gotten bigger, it's gotten irregular in shape. And as it progresses even further, as everyday Joe Nunnally in hales five, 10 puffs per cigarette. 10, 20, 30, 40 cigarettes a day, 365

days a year, 25, 26, 27 years, that smoke gets painted on the surface of his airways. Just like Dr. Wynder painted the tobacco tar on the backs of animals and painted over a much longer period of time.

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And now the cells are really beginning to look quite unusual. Not only are the nucleus big and irregular in shape, but it looks modular. The color isn't uniform, okay. And these are the cells that begin to frighten pathologists. They're not cancer yet. But they're ones that show the person has been pretty far along in the process of developing cancer, and when we look at people who smoke, we find that smokers are much more likely to have these changes than nonsmokers, and that heavier smokers are much more likely to have them than light smokers.

And finally what happens is you get a cancer. One cell makes it through the entire process and becomes a cancer cell. It loses the ability to stop growing. And it gains the ability to invade. And this is the first step, it is called, "carcinoma in situ." You've got cancer. All these have grown and divided and now a mass in there, but it hasn't invaded through the wall. And then the next step is, it invades through the wall. Often getting into the bloodstream and sending cells to other tissues to cause metastatic disease.

So by looking over time, at the airways of people, we see the same kinds of changes that we

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see when we paint tobacco tar on the backs of animals. But that's not all the evidence we have. Anybody who saw lung cancer would want to do something about it. Early in the century, 1930, 1940, 1950, physicians and scientists identified that there was an epidemic of lung cancer. Lung cancer used to be a very rare disease. It's now the largest cause of cancer death in both men and women.

MR. ULMER: Your Honor, I'm not sure how we got from the question that was asked into this area. And I just think there ought to be some sort of question and answer session rather than just kind of a dialogue.

MR. MERKEL: Your Honor, usually the objection is leading. I asked the witness to explain the process by which cigarette smoking causes lung cancer, and now that's what he's doing.

MR. ULMER: We're talking about what goes on in the 30s, '40s and '50s. Charlie usually does lead, Your Honor, and I don't object. I would request some sort of question and answer. So we'd be able to object and have that opportunity.

JUDGE CARLSON: It might be a good time to ask a question, Mr. Merkel.

Q. (By Mr. Merkel) Dr. Burns, would you

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continue with your explanation, please, of how we know this causes cancer and what we have learned over the process of history that leads you to the conclusion cigarette smoking causes cancer?

A. So we go back to the 1900, there's a

review of the entire world's literature of lung cancer around that time, early 1900, about 1910 or so. And they concluded that they couldn't say much about lung cancer, but one thing they could conclude that it was one of the rarest of human cancers. It almost didn't happen. We didn't even keep track of it in terms of death certificates and national vital statistics until about 1930, it was so unusual.

But then they noted there was an epidemic. And actually one of the people who identified that epidemic is from this part of the world, Dr. Ochsner, Alton Ochsner, who founded the Ochsner Clinic. When he was in medical school in the 1920s, they called the entire dorm out at night, because this autopsy was on a patient with lung cancer, and they might never again in their professional lives see another case of this rare disease. Dr. Ochsner when he finished his training saw four cases his first year in practice and thought there must be an epidemic.

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Currently, a thoracic surgeon who only saw four patients in his practice would think that his referral practice had had disappeared. It is now the most common cause of cancer death in men and women.

When we saw that happening, people became concerned, and they said, "What could cause this?" This isn't something that's been around forever. It's something new. Let's find out what's causing it. And they looked at lots of things. One of the things they looked at was cigarettes. So how would you look at it? This is all pretty much common sense. Science gets complicated, and we use a lot of terms. But it's common sense.

You go, and you look at people with lung cancer, and you ask them questions, and that was done, that was the done in the 1950's. We found that the people who were -- had lung cancer were much more likely to be cigarette smokers than people from the community, the people in the hospital with other diseases. And that they were much more likely to be heavy smokers.

So then what we did was we took a group of people who had nothing wrong with them, and we followed them for long periods of time. There's now

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been multiple studies that have followed people for very long periods of time, 10, 12, up to 29 or 30 years, and what we found was that the people who got lung cancer were cigarette smokers. It occurs in nonsmokers, but only rarely.

Not only that, but the people who smoke more, two packs a day, had much more lung cancer than people who smoked one pack per day. People who started earlier in life, like Joe Nunnally, had much more lung cancer than people who started later in life. And perhaps, most importantly, when you look at people who quit, the risk of lung cancer came down. Slowly, over time, after about 15 to 20 years, it comes down to about twice the risk of someone who's never smoked.

That's been demonstrated on people in the

United States, people in other countries, in men, in women, in all kinds of different populations, multiple different studies done at different times, different countries, different ways of approaching the problem.

And then finally, what you do is -- because this is -- can be complicated stuff, is you bring together groups of experts, and you say, "We want you guys to sit down, look at all the evidence,

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look at everything that's ever been done on this. And reach a judgment about whether the evidence there is sufficient to say cigarette smoke causes lung cancer. We're not talking about equivocation now. We want to know whether the evidence establishes that cigarette smoking causes lung cancer."

They did that, they did that in England in 1962 at the World College of Physicians. We did it here in 1957 and '59 with the Surgeon General making those statements. We did it formally with a group of independent experts in 1964 with the Surgeon General's report. And you know, every single group of scientists since that time that has looked at this body of evidence has reached exactly the same conclusion. That includes the World Health Organization, Canadian governments, European governments, American Cancer Society, American Heart Association, American Lung Association, American Medical Association. Every group of scientists who have looked at this have reached the identical conclusion with one exception, and that's the tobacco companies.

MR. ULMER: Your Honor, this is irrelevant, and we object to it. It's not relevant,

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and it violates the pretrial rulings.

JUDGE CARLSON: Any response, Mr. Merkel?

MR. MERKEL: Your Honor, it is relevant. It goes into the question of causation of lung cancer which is, I think, the very first issue in the lawsuit. Does it -- is it caused by smoking?

MR. ULMER: That's not the part of the answer I objected to, Your Honor. He can testify about the studies and the findings by the scientists and reports. The rest is not relevant to this case.

JUDGE CARLSON: Well, what part are you objecting to now, Mr. Ulmer?

MR. ULMER: Could I approach, Your Honor?

(Off-the-record discussion held at bench.)

JUDGE CARLSON: All right. For the record, just for the record, I'll overrule the objection. But we need to stay focused on the issues.

Q. (By Mr. Merkel) You mentioned, Dr. Burns, the various organizations who have sponsored and conducted studies that have concluded that cigarette smoking causes lung cancer. What has, if anything, the tobacco industry and R. J. Reynolds, in particular, concluded as far as we know

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about whether it causes lung cancer?

A. For my entire professional career, up until the day Joe Nunnally died, R. J. Reynolds maintained adamantly that there was not sufficient scientific evidence to conclude that cigarette smoking caused any disease, including causing lung cancer.

Q. Now, a study like you're talking about where people are brought in and followed over a long period of time, what -- what is that study known as, Dr. Burns?

A. That's epidemiologic studies, and that type of epidemiologic study is called "Prospective." What you are doing is you are looking forward in time to see what happens to those individuals.

Q. And is there another type of epidemiological study?

A. Yes. The other type of Epidemiologic study is called, "Retrospective." You look back, you identify people, for example with lung cancer. And you look backwards to examine their behaviors and other characteristics that would help tell you what would have produced their lung cancer. Both of those forms of studies have been done repetitively with cigarette smoke.

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Q. Are epidemiological -- and I'm bobbling that up -- studies of that sort, Dr. Burns, are those scientific studies, does the scientific medical community regard those as scientific evidence?

A. Absolutely. They're a critical part of scientific evidence, because they're one of the few ways we can examine what happens in people. You can't take a group of people and expose them to cancer-causing substance. And so in order to the find out whether the cancers are caused by in people, you need to do studies looking at people. And you need to do studies that look forward in time that control for all different kinds of characteristics. And they're done in different populations. Where you examine the relationship very much in detail, how strong is it, how tight is it, what other things could possibly explain it.

All of those things have to be done if you're really going to examine what causes disease in people. And epidemiology is the study of disease causation in people.

Q. The mouse study that Dr. Wynder did, what would I study like that be called?

A. That would be called an experimental

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study or animal study. Where what you're doing is you're taking and exposing one animal to a chemical. Painting that chemical on its back. And comparing it, then, to another animal that's treated identically. And you paint saline or some other substance on the animal's back which doesn't contain the chemical which you're testing.

Q. Is that considered scientific evidence by the medical and scientific community?

A. Absolutely. It tells you a great deal about the characteristic of the chemical that you've placed on the back of that animal.

Q. And did I understand you to say that R. J. Reynolds and the tobacco industry as a whole has -- claims that there is no scientific evidence linking smoking to lung cancer?

MR. ULMER: Your Honor, this is not relevant to this case. He's trying to try some other case here. We object to that.

JUDGE CARLSON: I sustain as to the form of the question, be rephrased.

Q. (By Mr. Merkel) What is the position through from the time Joe Nunnally -- well, from the time that the studies first came out in the early '50s you've told us about, Doctor, and Joe

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Nunnally's death which occurred in 1989, what has been the position of the tobacco industry in general and R. J. Reynolds, in particular, as to whether cigarette smoking causes lung cancer?

A. They have consistently and repetitively maintained for all of that time, that the scientific evidence was not sufficient to conclude that cigarette smoking caused any disease, including not sufficient to conclude that cigarette smoking caused lung cancer.

Q. Is there any debate, real debate in the scientific community as to whether cigarette smoking causes lung cancer, Dr. Burns?

A. No, there isn't, and there hasn't been for a very, very long time.

Q. When, as far as you would say, in the medical community any question of that was laid to rest?

A. I think that the scientific community reached a judgment by the mid-1950s, and it was finally laid to rest by the Surgeon General's report in 1964 in a very formal and very complete fashion for the United States.

Q. And if any question remained between that period, between 1950 and 1964, what was the opposite

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side of the question?

A. The opposite side of the question was largely maintained by the tobacco companies who said, "Well, you know, this piece of evidence doesn't say this, and this piece of evidence doesn't say that, and all the evidence together doesn't lead us to a conclusion, and we don't know."

MR. ULMER: Your Honor, we object. This is not relevant. It violates the Court's pretrial order, and can we ask the Court to strike the testimony. That particular answer, and ask the jury to disregard it. We have violated, in my view, two or three of the Court's pretrial rulings with the last couple of questions and answers.

JUDGE CARLSON: As to that particular question, I'll sustain the objection, ask the jury disregard the last question and response given by the witness.

Q. (By Mr. Merkel) Dr. Burns, as far as the question that was out there, if there was a question about the causal effect of cigarette smoking, what was done in 1964 to try to lay even that question to rest?

A. In 1960 -- well, it was actually 1962, the Surgeon General, at the request of the president, President Kennedy, undertook to answer this question once and for all in a way nobody could object to.

They took people who hadn't offered an opinion. Who hadn't made a public statement about tobacco. They said to the health community and the tobacco community, tobacco companies, anybody on this list that you don't like, you can veto. Neither side vetoed anyone.

They brought that group of people together, and over 13 months those folks reviewed all of the evidence, discussed it, argued about it, went back and looked for more information. Asked the tobacco companies for information. And finally, at the end of that process, they look at it all, and they reached a judgment, and that judgment was unequivocal. They said, "Cigarette smoking causes lung cancer in men." They didn't say there was any doubt. They didn't say they were uncertain. They said, "We now know, and there is no doubt in our minds."

Q. At that point, Dr. Burns, did the tobacco industry and R. J. Reynolds then concede that it caused lung cancer?

MR. ULMER: Your Honor, may we approach?

JUDGE CARLSON: I'll sustain as to that question as I heard it.

Q. (By Mr. Merkel) Was there any comment at that point, Dr. Burns, by the tobacco industry following the release of the Surgeon General's report?

MR. ULMER: The same objection, Your Honor. He wants to try a case that he doesn't have. This has nothing to do with the case that is before this jury. We object.

MR. MERKEL: Can we approach again, Your Honor?

JUDGE CARLSON: All right, sir.

(Off-the-record discussion at bench.)

JUDGE CARLSON: Ladies and gentlemen, you've been in place for a while. In fact, let's do this. It's about -- you've been in place for about an hour and 20 minutes, and it's about 11:35. So let's go ahead and take a lunch break until -- let's just go ahead and say 1:00 o'clock. I'll try to give you about an hour and 15 minutes for lunch everyday. Because by the time you get out and get back, I'll give you a little time, so you need about an hour and 20 minutes for lunch. We do need to start back at 1:00 o'clock. I do noticed to ask you not to discuss the case during the break. Do plan to be back in the juror box at 1:00 o'clock. Do be back in the courtroom at 1:00 o'clock. Thank you.

(Jury exits courtroom.)

JUDGE CARLSON: You can have a seat. All right.

MR. LISTON: Your Honor, may I go on the record for one thing?

JUDGE CARLSON: All right.
MR. LISTON: While Mr. Merkel and Mr. Ulmer were having a conference with you at the bench, the doctor witness was standing here having a conversation with a juror. And I think that's improper, and we object to it.
JUDGE CARLSON: I didn't see it, but if that happened, Doctor, certainly there will be no contact or discussion with any member of the jury. Even though I'm sure it was casual conversation, like it being a nice day or whatever. There's to be no one on one conversation with a juror.
THE WITNESS: I'll respect that.
JUDGE CARLSON: Now, as I see the question here, it was "At that point, Dr. Burns, did the tobacco industry and R. J. Reynolds concede that it caused lung cancer?" And that's when the

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objection, again, and counsel approached the bench. All right, Mr. Ulmer.
MR. ULMER: Your Honor, from the -- from the opening statements throughout the entire direct examination of Dr. Burns, the Plaintiff is proceeding as if she has a case that she no longer has. As the Court knows, there is no fraud claim. There is no misrepresentation claim. There is no conspiracy claim. There is no deceit claim. There is no fraud on the public claim. And maybe most importantly, there is no failure to warn claim of any type.
The claim that remains is a negligence and strict liability claim that derives its force under "Sperry New Holland v. Prestage". And the Plaintiff has violated, in my view, the Court's pretrial ruling with respect to that. And with respect to a number of other issues in limine. And what we've asked the Court to do is to let us try this design defect claim case up to this jury, and it's been bifurcated into two phases. And if there's a verdict for the Plaintiff, then we can get into these kind of issues. But this is improper now to put this kind of evidence before the jury. I don't know why the Plaintiff just having conceded

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these other issues, the fraud, the misrepresentation, the conspiracy, the failure to warn, won't try a negligence or strict liability for tort and design.
JUDGE CARLSON: Let me find out, Dr. Burns, what the question was, and you got to the point, they said, I guess, the warning that cigarette smoking causes lung cancer in men, said that without any doubt, we all know there's no doubt in our minds. And then the question by Mr. Merkel was at that point, Dr. Burns, did the tobacco industry and R. J. Reynolds then concede that it caused lung cancer? At that time, it was objected. What would be your response?
THE WITNESS: That they did not.
JUDGE CARLSON: How is that going to help the jury decide the issue on whether or not, you know, on any of the issues before the jury, how is the fact that Dr. Burns tells the jury that R. J.

Reynolds did not concede that it caused lung cancer or smoking caused it, how is that going to help the jury decide?

MR. MERKEL: I'll explain that, Your Honor. We're dealing -- Mr. Ulmer wants to create a straw man of issues that are no longer in this case,

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misrepresentation, fraud, and all of that, sure this will go to that, sure this will go to punitive damages. But what we have is a negligence case, as well as a strict liability case. Mr. Ulmer has told the jury for 30 minutes in his opening statement of all the wonderful, interesting, intriguing things that R. J. Reynolds has done to be a good guy. And to try to solve this problem and why they're not guilty of negligence. Otherwise, what do we care about premier cigarettes that came out years after Mr. Nunnally was dead? What do we care about reconstituted tobacco or stems versus leaves or holes in the filters or filters or any of those things he told about?

It's because their conduct, if it's reasonable, excuses them from a negligence case, and if it's unreasonable, it makes a negligence case. And that's what we're trying to do is make a negligence case, not a warning case, not a fraud case, not any of these other things that are gone. But pure, garden variety negligence, and if they did not do what a reasonably prudent manufacturer should have done, i.e., when the Surgeon General says cigarette smoking causes cancer. That they should have come up as a reasonable person and said, "We

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agree, public, they're right. Go on and smoke at your own risk, but you're committing suicide."

If that's what was reasonable, they didn't do that. Instead, they came out and said, still, there is no scientific evidence. It still hasn't been proven, don't believe it. And that, Your Honor, is negligence. It may be worse than negligence, but at a bear minimum, it's negligence. It is a -- taking a position that they know the public is going to rely on. That they know that is going to preserve this question. This controversy about does smoking cause cancer. They deliberately preserve that question so that people would not feel guilty, so that people would not fear death.

They would say, well, you know, people say everything causes cancer. Nobody knows for sure. You know, you read both sides of it. And that's, at this point, 1984, after the Surgeon General's report, I submit a responsible company should have come in and said, okay, you're right. It does. There's no question about that anymore. Do it at your own risk. But they didn't, Your Honor. They still haven't today. As we sit here right now, this industry still will tell the public there is no scientific evidence that cigarette

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smoking causes cancer. And that's negligent behavior.

Whatever else it may be, it's minimally negligent behavior.

MR. ULMER: Your Honor, the -- we argued at great length pretrial as to the nature of this negligence and strict liability claim. And how they come together under "Hunter v. General Motors" and merge into one discreet group of factors. The "Prestage" factors is the way for smoking to be analyzed. This has nothing to do with any of the "Prestage" factors. I'm entitled to tell the jury about our efforts to make a safer product. Because that's one of the factors of Sperry New Holland. That's one of the factors. So I haven't opened the door of argument.

What Mr. Merkel is trying to do now is trying to revive a representations and a warning claim, and he's doing it by violating the preemption doctrine. He wants to prove that our conduct diluted the effectiveness of warnings that were required by Congress. And he can't do that under "Cippolone." So we submit, Your Honor, that we ought to try what claim the Plaintiffs has rather than fraud, and misrepresentation and conspiracy

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claim.

MR. MERKEL: Your Honor, in 1964 there was no warning on the pack. "Cippolone" doesn't have a thing to do with 1964. And that's the question in front of the witness at the moment.

JUDGE CARLSON: Going back to the issue, I know it's been argued back and forth for months now about what we knew and when we knew it. And I hope that is clear now, and all the mounds of documents, we know both sides can stack up documents on either side of the issue. But on this particular question, just basically that, you know, that the tobacco industry or did R. J. Reynolds concede that smoking, cigarette smoking cause lung cancer. And if permitted to do so, then Dr. Burns can testify, no, I don't see that as a what we knew or when we knew it type situation. It's just simply -- I mean, response that by that time the warnings had come out and did R. J. Reynolds agree with the warnings?

Now, it could touch upon misrepresentation, or fraud or whatever, which all those issues being gone. But I don't see that as an improper question at this point. And I guess we -- you know, maybe sometimes we can't see the forest for the trees. But with all the risk utility and

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the argument certainly under "Hunter" and the language there in "Hunter" is somehow we merge everything together under the risk utility factors and throw out negligence. I don't think we've thrown out what negligence is, and what the test is for negligence, and I'm sorry I have to talk over that noise.

I may just have to have a talk with the Board of Supervisors. The Board of Supervisors had two choices when they decided to do this renovation, either let us work around Court in doing renovation, or tell the Judges to set up an alternative or temporary Court facilities. And let them come in and do their work, but something -- I'll have to take care of that.

But in any event, you know, the -- I think both sides agree that there is still a negligence theory that is still viable. I note in reading some of these other cases that there was both theories. I think Judge Bogan dismissed the negligence theory as a matter of law at some point in one of the trials.

I know in the "Prestage" case with Mr. Merkel and Mr. Ulmer both involved in. Ironically, the -- the introductions of "Prestage"

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starts out that "In this products liability and negligence suit, "Prestage" proceeded on two theories of liability. Number one, strict liability in tort, and, two, negligent design." So I can't throw out the basic rules regarding the negligence, and what that is. And the reasonably prudent person and ordinary care, and so that's still there, and I think as to that particular question, that's not getting into a what we knew when we knew argument. The warnings were out there, obviously R. J. Reynolds knew the warnings were there.

And based on the warnings did Reynolds concede that cigarette smoking caused lung cancer, as to that particular question, I'll overrule the objection. But again, hopefully we can stay focused on the issues at hand, the remaining counts in the complaint. That being strict liability and negligent design. And I know there will be occasion that some of this evidence may kind of touch upon the other dismissed counts. But clearly even if the jury has to be instructed, and they will be instructed as to what the issues are. What the Plaintiff seeks to prove, and what the Plaintiff has to prove and the burden of proof being on the Plaintiff as to these two counts. But as to that

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particular question, I'll overrule the objection. So let's go ahead and take a lunch break, and we'll start up at 1:00 o'clock.

MR. ULMER: Thank you, Your Honor.

JUDGE CARLSON: Thank you, Dr. Burns. You can step down. We'll be in recess until 1:00 o'clock.

(A lunch break was taken.)

JUDGE CARLSON: Be seated.

(Jury enters courtroom.)

JUDGE CARLSON: Members of the jury, we are ready to go forward. Since you have had the lunch break, I need to inquire of you again. Have you had occasion to talk to anybody about the case, or anybody tried to talk to you about the case or any outside information at all that you may have received about the case? I take it, then, there's been no contact, discussion or information received on the case, and we'll move forward at this time. All right, Mr. Merkel.

Q. (By Mr. Merkel) Dr. Burns, I believe just before we broke the question before the objection was following the publication of the Surgeon General's report in 1964, did the at that point R. J. Reynolds come forth to the public and

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acknowledge that cigarette smoking caused cancer?
A. No, they the did not.
Q. From the standpoint, doctors, your studies of cigarette smoking and the behavior of smokers, can you tell us what is known about why people begin to smoke? Is this a natural thing that we have a craving for? Or what causes smoking, on onset of smoking?
A. No, it's not a natural thing. And as a matter of fact, cigarettes have only been around this century. Tobacco has been with us a long time, but cigarettes are really a -- an invention of this century. At the beginning of this century, the number of cigarettes that people consumed on average, if you take all the cigarettes consumed and everybody over the age of 18 and divide them was 54. And it peaked at about 4300 in 1963.
So it's really something that's happened this century. And so when you look at the behavior, one of the things that you do is you begin to look at when does it start? 90 percent of smoking behavior starts before age 18. 60 percent before age 16.
So this is really a behavioral problem that if you get to be an adult without becoming a

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smoker, chances are pretty good you're never going to become a smoker.
Well, if it's predominantly kids that take up smoking, what is it that they're looking for? There are some things, like cocaine, where your first use produces a euphoria that people want to go back to. The first use of tobacco is not like that. As I said, the first use produces coughing. Some people vomit. Nicotine makes them sick, but they come back, and they learn how to smoke.
Well, why? We know actually a great deal about why. The kids are looking for something to the change their image of themselves, okay. Adolescence is a time of great turbulence, great in security, being uncertain, feeling inadequate in lots of different ways.
What happens is the kids want to look like adults, particularly if they see their parents smoking. Okay, they'll adopt those adult role models, and that's an important characteristic. They want to be in with their friends. So if all their friends smoke, they're much more likely to take up cigarette smoking. And they want to be cool, sophisticated, they want to have a confident image. They want to project themselves as if

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they're cool, confident, secure, in control of their environment. Physically and sexually attractive, and bigger and larger than life. And they're looking for something that will give them that image.
If you look at what tobacco advertising is --
MR. ULMER: Your Honor, we object to this. This violates the Court's ruling on motion in limine.
JUDGE CARLSON: I'll sustain the

objection to that comment.
MR. MERKEL: Your Honor, may we approach a moment?
JUDGE CARLSON: Yes, sir. Somewhere along the way, we've got to get focused.
(Off-the-record discussion at bench.)
JUDGE CARLSON: I think if we can handle it this way. Mr. Merkel, if you'll go back and ask the witness the question, make sure he understands what it is and the information that's sought, and move at it that way.
MR. MERKEL: All right.
Q. (By Mr. Merkle) Dr. Burns, you were talk you were talking about what leads people, in

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general, to smoke and so forth. What role does advertising play in a person deciding they might want to smoke, talking about generic advertising of the type that was done in the '50s and '60s.
MR. ULMER: And Your Honor, we object on the basis of your June 23, 2000 order.
JUDGE CARLSON: Let me see that.
(Off-the-record discussion at bench.)
JUDGE CARLSON: As long as he knows what's sought through the question, Mr. Merkel, I'll overrule the objection to the question, as long as he can understand its parameters.
Q. (By Mr. Merkel) Do you understand, Dr. Burns, what -- what my question is?
A. Yes.
Q. Not talking about advertising targeted towards anybody, advertising in general. What is the effect of that, and how does that play into the use of tobacco in this country?
A. Okay. If you look at tobacco ads, what do you see? You see images. They're not informational ads; they're images, and they're images of secure, confident, in control, dynamic, exciting people smoking. So they create this perception. This image of what smoking is.

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That image is very important, because it's the image the smoker uses then to reinforce and justify their own behavior. And those images of the "Marlboro Man," secure, confident, rugged, dominant, in control of your environment, those images are attractive to all of us. But with an adolescent, they resonate. Because that adolescent feels inadequate in all those areas. So just as with most advertising, this image advertising is much more powerful with adolescents.
It's powerful because it fills a need that they have to change how they feel about themselves. And because of those images, when they pick up that cigarette, they can get through the cough. They can get through the nausea. They can feel like they're in and being an adult.
And they use it, and they use it, and they use it. And finally, they've used it enough for the nicotine to begin to take hold. For the nicotine to be able to create associations with things that have happened in their lives that are positive. For the nicotine to help them deal with

boredom, frustration, anger. And so they learn that when they ingest the nicotine, it can alter their internal mood. The nicotine actually changes how

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they feel.

That doesn't change the world around them. It doesn't make whatever was making them angry, frustrated, board, unhappy go away. It just helped them with the feeling. So as the effect of the nicotine the wears off, those feelings come back. So they learn, then, to associate unpleasant feelings, negative feelings with a falling nicotine level. And they've now become addicted to maintaining a level of nicotine so they the don't feel bad.

So it starts out experimenting, trying to change the way they appear to the world around them. And then they use it, and it works -- works for them. They put the cigarette in the mouth. They don't think they're the Marlboro Man. But it makes them feel a little better. And then the nicotine starts to take hold, and the more they use it. And the more regularly they use it, the more powerful that hold comes, then, you know, they get to be 25, 30, 35, and they say, you know, I'm no longer immortal and invulnerable, you know, things could happen to me.

Maybe I ought to pay attention, maybe I ought to exercise a little bit. Maybe I, you know,

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shouldn't abuse my diet. Maybe I should quit smoking. But at that point, they've now had 10, 15, 20 years of building it into the way they live their life. This addiction to nicotine. And it's very hard to give up that tool that they use to cope with everyday life.

Q. From the standpoint of addiction, how long has it been known, Dr. Burns, that nicotine has this addictive quality?

A. Well, we have known for a very long time that people had great difficulty giving up smoking. It was not until 19 -- the mid-1980s, and it was formalized with the 1988 Surgeon General's report. That we had in the public realm the information that would allow us to define scientifically in animals that it was nicotine, the drug, that caused the addiction in cigarettes.

And that was the point in time at which it became clear that it was the drug nicotine that was creating this powerful addiction. And it wasn't just a behavioral conditioning that had occurred, it was really the drug nicotine in the cigarettes that was causing this difficulty people had to quitting.

Q. Now, Mr. Ulmer told the jury in opening this morning, Dr. Burns, and I wrote it down, that

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there was no secret, and R. J. Reynolds doesn't hide the ball about nicotine, it's addictive. What, historically, has been R. J. Reynolds' position about nicotine to the public?

MR. ULMER: Your Honor, I think the record will -- doesn't bear out Mr. Merkel's comments, so I object to misrepresentation of the

comments of counsel.
JUDGE CARLSON: The record will bear it out, and the jury will recall whatever the opening statements were used in the preface of the questions. And certainly what the lawyers by way of the question is not evidence before the jury.
A. From the time it first became aware, from the time we first became aware that cigarettes caused disease in the '50s through the Surgeon General's report to the time that Mr. Nunnally died, R. J. Reynolds has maintained a very consistent position, which was cigarette smoking and nicotine are not addictive, period.
Q. (By Mr. Merkel) Have they changed that today, to your knowledge, Dr. Burns?
A. It is my understanding that they have adopted a position following the master settlement agreement of the State's Attorney General lawsuit

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which obligated them to do that. That they do not dispute the public health community's conclusion that cigarette smoking is addictive.
MR. ULMER: Your Honor, it's obvious no in limine ruling the Court has made is going to be honored, and we object to the testimony.
JUDGE CARLSON: I sustain the objection. And the witness will be instructed regarding any prior rulings. The jury will disregard the last statement by the witness as to any settlements of any other lawsuits. And that has no bearing on this case, what the jury does in this case. So I'll sustain the objection, disregard the last comments by the witness.
Q. (By Mr. Merkel) Without any impetus -- well, let's take it as late as 1994, Dr. Burns, what was the public position -- the lasts publicly stated position of R. J. Reynolds about the addictiveness of nicotine?
A. Their public position at that point, as testified to by their CEO in front of Congress under oath, was that cigarette smoking is not addictive.
Q. Would the knowledge that it was addictive, and that it was an addictive drug or agent that caused addiction, be of use to a user who

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was of a mind to quit this habit?
A. I believe it would. Because what it means to most people is that you need to get external help. That you need something to help you through the process. It doesn't mean that you can't quit unless you get external help, and many people do. But it means that it's more than just a habit. It's more than just something that you've learned how to do. It's really something that has a physiologic hold on you.
And that, therefore, medicines and various other kinds of treatment can help you get off, and that piece of information, I think, is very helpful to people who are smokers and are trying to think, or want to quit, or are thinking about quitting.
Q. Statistically speaking, Dr. Burns, what percentage of people that become addicted to

nicotine are able to quit?
A. Well, about half of the people who have ever smoked are now former smokers. So that sounds like it's pretty easy. If, however, you look at people who try to quit, and they make -- if they make a serious effort to quit, 95 percent of the people who try to quit on their own fail. 95

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percent relapse back to smoking. The way you get half of the population is former smokers, is people try, and they try, and they try again. And ultimately, some of them become successful.
So yes, it is possible to quit. It is possible to break the addiction. It's possible to break the addiction on your own without help. You do much better if you get help, but it's possible. But it's not common. 95 times out of a hundred when people try to quit on their own, they're back to smoking cigarettes within a year.
Q. Now, Mr. Ulmer this morning again in opening statement discussed a great many things that he told the jury they would have a great interest in hearing about that R. J. Reynolds had done to try to improve the safety of their product. Were you able to hear that statement and those particular devices, Doctor?
A. Yes, I was.
Q. Are you familiar with those efforts, and the results of them and the effects of those attempted modifications, let's say, of their product?
A. Yes, I am. That's an area where we have, through time, conducted extensive study and are

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currently studying at the moment.
Q. Would you explain to the jury, Doctor, what all of these things were about as far as trying to lower the tar content of cigarettes, and how that played and what -- what is the result of all of that?
A. Certainly. We talked earlier about 1953. We knew that cigarettes caused disease in people. We knew that when you painted the tar on the back of animals, you got cancers. What could then be simpler than to say if we could get less tar to people, we might have less cancer. It might be a good thing to do. And in public health, we recommended that.
We didn't understand at that time, fully, how powerful the addiction was. And that people weren't smoking to get tar, they were smoking to get nicotine. So if you put a filter on and cut out half the smoke and cut out half the nicotine, people just pulled more smoke through, or smoked more cigarettes.
And then the cigarette companies began to produce what are called low tar nicotine cigarettes. And at the beginning, we thought that might be a good idea. But we didn't fully understand how

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people would use those products. Tobacco companies did. The way, principally, that they produce low tar nicotine cigarettes is by putting holes around

the filter. If you put the right size hole in, when you put that cigarette into a machine, the machine draws very slowly, much slower than people do. And all that gets into air that comes in through the hole in the side of the filter into the machine. There's no tar in the air, gets very little tar coming through the column of the cigarette.

When somebody puts that cigarette in their mouth, you know where those holes are? Those holes are where you'd hold it with your fingers, or where you'd put it in your mouth. And people don't smoke to get air. They smoke to get nicotine. So when they put those same cigarettes that when you put them in a machine, and it generates a tenth of a milligram tar or one milligram of tar or two milligrams of tar, and you put that same cigarette in someone's mouth and have them smoke it, they get eight, 10, 12 milligrams of tar. Because they're trying to get the nicotine in that cigarette, and along with the nicotine comes the same dose of tar.

If they preserve the amount of nicotine they're getting from the cigarette, they preserve

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the amount of tar. We've had, by machine measurement, a 60 percent reduction in the tar level of cigarettes. Lung cancer death rates ought to have changed. That reduction began in 1950s. They haven't. Lung cancer death rates in women, both black and white women, are still rising. Women are more likely, not less likely, to use cigarettes.

Lung cancer death rates in men have just begun to decline slightly, in black men very recently, white men by the late 1980s. But it's a tiny reduction, and it's explained by that 50 percent of smokers who have successfully quit, and are reducing their risk of disease.

When you look at two very large epidemiologic studies, one conducted from 1960 through 1972, and then one conducted 20 years later, from 1980 through 1988, a million people in each study followed for a long period of time. And you control for age and number of cigarettes smoked per day, and duration of smoking and all of the characteristics that we know define risks, do you know what you'll find? Over that period of 20 years, when all of this reduction in tar and nicotine was occurring, lung cancer death rates went up.

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So this has been what I would characterize as a public health misrepresentation or hoax.

MR. ULMER: Your Honor, we move to -- to strike that last comment and instruct the jury to disregard the testimony of Dr. Burns.

JUDGE CARLSON: I sustain the objection. And the jury will disregard the last comment by Dr. Burns. And I don't know if we need to make sure that the witness understands the parameters of the ruling or what, the prior rulings of the Court. But the jury will disregard the last comment by Dr. Burns as any public health misrepresentation. That has no bearing whatsoever in this lawsuit,

ladies and gentlemen. You must disregard it.
THE WITNESS: Okay.
Q. (By Mr. Merkel) Dr. Burns, has there been any beneficial effect from trying to lower the tar content as measured by a machine?
A. As far as we can determine, in terms of disease consequences, there has been no beneficial effect for public health. And there has been a detriment or a negative effect which is, for most people who switched the low tar cigarettes. The alternative is not high tar cigarettes, it's

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quitting. And so having these products available and having them presented as if they would reduce the tar that people are exposed to leads people to believe they might be safer. And, therefore, to not do the one thing they could do to reduce the risk, and which is to quit.
MR. ULMER: Your Honor, he's done the exact same thing again. We object to the testimony by Dr. Burns and ask that the last statements by Dr. Burns be disregarded by the jury. That's not in this case.
JUDGE CARLSON: And I'll sustain the objection. The jury will disregard the last comment by the witness.
MR. MERKEL: Your Honor, Mr. Ulmer has raised the issue of the low tar cigarettes as being a defective device. He brought this up in his opening statement. And the effect of that, whether it is or not, I would submit is certainly relevant.
JUDGE CARLSON: As to that particular question and response, the last response, I'll sustain the objection.
Q. (By Mr. Merkel) The other things that he told us they were going to show us sometime later during trial, Dr. Burns, reconstituted tobacco, or

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stems versus leaves and petunias, and I don't know all of them. But that project, what effect has that had, if any?
A. The -- there is no evidence currently that leads us to conclude that any modification that has been made in the current generation of cigarettes has any health benefit.
Q. As far as the cigarettes that are being sold today or were being sold in 1989, are they any less dangerous than those that were sold in the '50s from the standpoint of cancer-causing?
A. No. As I said, the two very large epidemiologic studies suggest that the risk has actually increased, not decreased. So these products have become more dangerous rather than less so.
Q. Is there a term or -- in the industry for the phenomena you described as being when you lower the tar that the person draws heavier on the cigarette or something of that sort? Is that a known phenomena enough to have a term assigned to it?
A. Yes, the scientific term is "compensation." You compensate with how you smoke the cigarette for the lower amount of nicotine that

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is present in the cigarette or present in the first draw of the smoke.
Q. Is this term used by R. J. Reynolds in their literature? Is this something tobacco manufacturers are aware of?
A. Yes. They also use a term that is similar called, "elasticity of yield." What that term means is that the cigarette will yield different amounts of tar and nicotine depending on how you smoke it. So the cigarettes are designed to yield one level when they're smoked at the way the machine smokes them. But as people compensate, they yield much more in the way of tar and nicotine. So that people can get the nicotine necessary to satisfy their addiction from this cigarette.
Q. When we were talking a few moments ago, Dr. Burns, about the -- the reasons that people take up smoking in the first place. Are those factors something that R. J. Reynolds has studied and written documents internally about as far as why people begin smoking and what they're looking for and so forth?
A. Yes, they have.
Q. Tell us about that, please.
MR. ULMER: Your Honor, we object to this
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witness. He is a doctor, and he's not said a word that I've heard about Joe Nunnally. Now he wants to interpret the internal Reynolds' documents. If this documents come into evidence, the jury can read them and interpret them just as well as this gentleman. So we object to that.
JUDGE CARLSON: Rephrase the question, Mr. Merkel.
MR. MERKEL: Let me get the documents, Your Honor, in case we need to. I was trying to save some time on it.
Q. (By Mr. Merkel) Are you familiar with a document by a gentleman named Teague at R. J. Reynolds that analyzed the reasons that people smoke, and what needed to be done about it and so forth?
A. Yes, I am.
MR. ULMER: Your Honor, and Mr. Teague is listed as a witness. They can call Mr. Teague by deposition. It is improper for this gentleman, this doctor to interpret R. J. Reynolds' documents. We object to that.
MR. MERKEL: Your Honor, there's nothing improper about him interpreting a document. It's a document he has knowledge of. And we're going to
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bring the knowledge to the presence of the jury. The jury may not be able to interpret the terms in a document like this.
JUDGE CARLSON: I'll overrule the objection based on the rule, the rule of evidence.
MR. ULMER: What's the document?
MR. MERKEL: Let me get it.
Q. (By Mr. Merkel) I hand you document number 569. Does that document, Dr. Burns, analyze the very things that you've been talking about?

That is the learner or pre-smoker, as far as what he is looking for in a cigarette?

A. Yes, it most certainly does.

MR. ULMER: Your Honor, may we approach the bench?

JUDGE CARLSON: Okay.

(Off-the-record discussion at bench.)

JUDGE CARLSON: Ladies and gentlemen, will you step back in the jury room just for a minute. It's not going the take very long at all.

(Jury exits courtroom.)

JUDGE CARLSON: All right. There has been an objection to what I'll refer to as P-0569. What's the objection, Mr. Ulmer?

MR. ALDEN: Your Honor, can I speak to

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that?

JUDGE CARLSON: All right.

MR. ALDEN: Maybe I should take them in backwards order. I think they should be in the written form up there if you'd like in the box we gave you.

JUDGE CARLSON: I've got this, and I've got the --

MR. ULMER: Your Honor, neither you nor Mr. Merkel have the actual document. Y'all have a cover sheet prepared by a lawyer describing the document.

MR. MERKEL: There's the actual document.

MR. ULMER: I don't know. I saw the Court looking at the cover sheet.

MR. MERKEL: Well, underneath it, Your Honor, is the actual document. The cover sheet is just a summary of it, but that is the document.

MR. ALDEN: Your Honor, I think the copy that they do have has the word "draft" sliced off on the first page. On that basis, we object to it as in authentic. We do have better copies. It does. "Draft" has been eliminated through the copying process. But that, frankly, is the least of our objections. This document is not a business record

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because it's a draft. It was not -- it doesn't reflect any research. It's Dr. Teague taking an idea and spinning it by himself.

He testified in testimony that we have designated in this case that this was simply kind of a blue sky proposal that he did. That he didn't circulate it, that the company didn't act on it. So in a sense, Dr. Teague did it, and he stuck it in a drawer. And it's a draft. And on that note, specifically, the State Court of New York just weeks ago -- I'd like to hand it up if I could, give Mr. Merkel a copy -- excluded both this document and the other document from Dr. Teague that they want to offer through this witness. It's on the bottom of page 2. This is the Anderson.

JUDGE CARLSON: Defense was objecting the other day the Plaintiff had no Mississippi law to support their authority. Now I'm getting a New York law from the Defendants.

MR. ALDEN: It's a common code of evidence, I think. So I guess our first objection

is it's inauthentic. They should use a correct copy with the word draft on it. Second, we don't think it's a business record. Accordingly, they can't qualify it through the hearsay rule. And third, if

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you look at what this is, it is one scientist speculating, taking the assumption that nicotine is the critical thing. And then spinning it very well several ways.

Nothing ever happened with it. They can't show that a new product came out of it. He does suggest several proposals at the end. They can't show a new product. Reynolds didn't introduce any new products soon after or in any way connected to this memorandum. And they can't show that it means anything. And what it's really being offered for is to inflame the jury with -- it's written way after Mr. Nunnally was smoking. It was written in 1972. Mr. Nunnally was by that time 22-years-old. He certainly in any way could not have been affected by any cigarette that could have come out of this research planning memorandum. He was far beyond what Dr. Burns has testified to as the pre-smoker phase. So we think it is irrelevant. We think it is unduly prejudicial. We think it is not a business record and at least the copy they attempted to offer isn't authentic.

MR. MERKEL: Your Honor, the document is not offered for whether they did this, or implemented this or not. It's offered to show that

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what Dr. Burns has testified to about the reasons and the motivations for people smoking. And what the companies knew about that and what they -- when they acted in selling and marketing as they did, what they knew about the youth propensity. Or about any new smoker, of whatever age his propensity to smoke. Describing the coughing, the ill feeling, the awkwardness of it.

And that they needed to make their products more palatable in order to induce people to get over this bad period and become addicted. It goes to the question, again, of whether a cigarette or not is addictive? An argument that they have continued to make that they were certainly making at the time in 1989 at the time that Joe Nunnally died. And this shows that, internally, their scientists knew very well it was addictive. They counted on it being addictive. And that is the relevancy of it, what they, themselves, knew about an issue that they have tried to preserve and are still trying to preserve in front of this jury.

And there are other things that are contained in the document are that as far as the warnings are concerned, Mr. Teague concludes in the end that the warnings might even be beneficial, if

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we're dealing with young people. Because they would then envision themselves as being macho and smoke in spite of the warning.

They are making the argument to this jury that this Joe Nunnally child when he began smoking was negligent. He was assuming a risk. He was

totally responsible for his own act. And what he did was exactly what they predicted he would do. And what they thought he would do even after warnings were on the pack. This goes to the reasonableness of what he did. This is -- if this were a criminal case, Your Honor, this would be the same thing as entrapment. Through their advertising and through their statements, they entice someone to start. And then when the person starts, predictably becomes addicted and predictably incurs a disease, then they come in and say well, shame on him. It's all his fault. He never should have started.

Yet if people did what they say they should do, they'd never sell a cigarette. And that's the dichotomy of this whole argument they make. On the one hand, we'll tell you they're not addictive. They don't cause cancer, but if you used them, you assumed the risk of it, Your Honor. And this document of theirs clearly shows what they

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really believe. What the scientists in their laboratory knew about the situation.

This New York Court, the only thing it did was conclude based on whatever Mr. Teague had to say in that Court that this was not kept in the regular course of business. And that has no bearing whatsoever on what this Court might conclude based on what Mr. Teague might say. There's no resjudicata effect to his testimony in another court, where we were not present to cross examine him. That's the only finding in this as to Mr. Teague's document.

We've got a deposition here where all of that is gone into with Mr. Teague. And the Court can decide whether you think Mr. Teague kept this and did this study and work in the ordinary course of business. Or whether he was doing some random musing, I guess, as they would have us believe. But that's a completely different issue.

MR. ALDEN: Your Honor, I'm really amazed by Mr. Merkel's argument. He starts out by saying they're not offering it to show that any of this happened. But then at the end he's saying this shows exactly what they knew, exactly what they did, and that's why we're offering it. He also talked

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about Mr. Teague going into it in his deposition.

We attempted to deal with that yesterday before the trial, and they suggested we not do that. We made, I thought, a serious effort to do that. That's why I came over here. We attempted to deal with it in Mr. Teague's deposition. If they want to do it that way, we can deal with it when we get to Mr. Teague's deposition. They're asking to deal with it to introduce the document through an expert that has nothing to do with this document. He's been given a hand selected group of Plaintiffs' selected documents and asked to look at them. And that's how they're attempting to the introduce them. That's inappropriate.

And finally I heard Mr. Merkel say he wants to go into warnings. Their warning claim is gone. Their warning claim is long gone. And if you

look at when this document was written, it was written in 1972. That's three years after you have preemption from "Cippolone." That's an absolutely preemptive issue. There's no way we can go into that at all, yet that's one of the reasons he wants to use this document. He wants to use this document because it's one scientist's musings that are sexy for the case. It has nothing to do with what

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Reynolds did. It doesn't reflect any new research.

It's merely one scientist recounting Reynolds' one scientist's assumption and spitting them out. And it went into his file and nothing happened with it. And I suggest that's what -- Mr. Merkel says it's not resjudicata, of course, it's not resjudicata. However, Dr. Teague did not go up to New York. It's the same deposition they're going to try to use whenever they're going to try to use it in this case that provided the basis for this other Court in New York to say that this is such a draft, it doesn't qualify under the hearsay rule which applies in Mississippi. Because it's a business draft.

MR. MERKEL: Your Honor, we're not interested in the warnings. What they're saying, in effect, goes to their claim of contributory or comparative negligence on the part of Joe Nunnally. And it merely observation that they don't think that that warning is going to hurt their cigarette sales. They think, in fact, it might enhance their cigarette sales.

That's not saying whether the warning is good or bad or R. J. Reynolds should have done anything different with the warning. That's saying

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that Joe Nunnally should not be faulted for behaving in response to a warning exactly like they anticipated he would behave. That's the purpose of the document.

JUDGE CARLSON: I'll sustain the objection. You know, if you deal with it with Mr. Teague, so be it, but as to Dr. Burns, he's quite capable of testifying, and has done so as far as his knowledge and opinions, but I'll sustain the objection.

MR. ALDEN: thank you, Your Honor.

JUDGE CARLSON: I'm ready for the jury.

(Jury enters courtroom.)

JUDGE CARLSON: Mr. Merkel.

Q. (By Mr. Merkel) Dr. Burns, Mr. Ulmer in another portion of his opening statement this morning indicated that when R. J. Reynolds first heard about the feeling that tobacco smoking was leading to or causing cancer, that this began research to try to identify carcinogens in the tar product of their cigarettes. Are you familiar with and aware of the research they did in that regard?

A. Yes, I am. Beginning about 1953, they conducted internal research, and they made a quite public promise to share that research.

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Q. And did they identify carcinogens in their research, Doctor?

A. Yes, they did.
Q. Did they identify some carcinogens that had not been previously known to the scientific community in that research?
A. Yes, they most certainly did.
Q. When were those identified?
A. 1959.
Q. And what did they do with that information once they identified it in their laboratories?
MR. ULMER: This has no relevance in Joe Nunnally's case, Your Honor, and we object.
MR. MERKEL: It was a year before they started smoking, Your Honor.
JUDGE CARLSON: On that question, I'd overrule the objection.
A. They kept that foresee credit, withdrew it from publications and did not publish it.
Q. What was the --
MR. ULMER: Your Honor, that answer needs to be stricken. We object to it, and it should be disregarded by the jury. That has nothing to do with a product defect case.

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JUDGE CARLSON: I'm going to sustain the objection. Again, ladies and gentlemen, disregard the last comment by the witness.
Q. (By Mr. Merkel) What was the carcinogen that was identified, Dr. Burns?
A. There were several, but the one that was most prominent was cholanthrene.
Q. And how, in the hierarchy of carcinogens or the toxicity of them or how it's rated in, how does that one rank?
A. It would be considered a potent carcinogen.
Q. Had it ever been identified in any other study at that time as being a constituent of tar?
A. With the exception of the tobacco industry, the public scientific community, the published literature did not know that this was present in cigarettes.
Q. And what would the effect of that knowledge have done when linked with the mouse studies and something of that nature, as far as the use that the scientific community would make of it?
MR. ULMER: Your Honor, the effect of that knowledge, we object. He's, again, violated the Court's pretrial rulings, and I object on that

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basis.
JUDGE CARLSON: And I sustain the objection.
Q. (By Mr. Merkel) The mouse study, Dr. Burns, if the scientific community had been aware that this carcinogen you're talking about was there, what information would that have added to the significance of the 1953 mouse study?
A. The mouse study, as I said, produced tumors. The question, then, is what in the tar produces the tumors? Early on, they had identified a particular carcinogen, benzpyrene, which was a well-known established carcinogen as being present

in the smoke. And initially, they said okay, we have the answer.

But then they tested the amount of benzpyrene, and they found that it only explained about two percent of the tumors they saw. And so that left people scientifically uncertain. Because the animal model with benzpyrene didn't correspond to the animal model with tobacco tar. Had they known all of the different chemicals and all of the different carcinogens, they could have added them up, looked at their interactions and said now we have an understanding of how this compound tar

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causes these cancers in the mice. It would have been a very powerful piece of evidence.

Q. I'm going to hand you Exhibit 38, Doctor. It's a "New England Journal of Medicine" article on the cigarette smoking and health issue. I ask you, if you would, first what's the date for that publication?

A. I believe that this is September 10th, 1953.

Q. This is about at the same time as the mouse studies?

A. This is about the same time as the mouse studies, and the initial epidemiologic studies showing the relationship this humans.

Q. And what did the journal relate as far as the dangers associated with cigarette smoking causing cancer, and based on the evidence that existed at that time, what did they say should have been done about it?

A. What they said was that this was clearly something that was scientifically very important, very certain. And that we needed to take action.

Q. And could you read for us what they suggested with regard to taking action or what would have taken place?

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A. I read from the editorial. "If such figures as these have been unduly publicized, the public, medical and lay" -- I'm having a little trouble with this copy -- "shows no sign of taking any of the relatively simple courses that would undoubtedly reduce the incidence of cancer. If similar data had incriminated a food contaminant that was not habit forming and was not supported by the advertising of a financial empire, there is little doubt that effective counter measures would have followed quickly. It is not insufficiency of evidence that accounts for lack of such measures against tobacco tars. And it is debatable whether or not little more alarm would be amiss.

It is true that the causative mechanism underlying the association between tobacco and lung cancer is not known. Although there is room for speculation in the presence of known carcinogens in tobacco tars. Also little is known about dosage, filtration of smoke and other factors that bear on the subject. However, if control of cholera had not been initiated empirically but had awaited demonstration of the vibrio, active and useful preventive measures would have been delayed 50

years."

Q. Thank you. To what extent, Dr. Burns, does cigarette smoking put in numbers or in percentages, to what extent does cigarette smoking contribute to the lung cancer problem?

A. Well over 90 percent of the lung cancers that occur in the United States are directly caused or excess lung cancers produced by cigarette smoking.

Q. Mr. Ulmer made a statement that R. J. Reynolds had spent millions, if not hundreds of millions of dollars, making or attempting to make a Premier brand of cigarette this morning. Could you give us any, by comparison, Dr. Burns, how much they have spent in advertising over the years to induce people to commence smoking?

A. I can't give you precise numbers. R. J. Reynolds was responsible for about 20 to 25 percent of advertising. The tobacco companies as a group spend about six billion dollars in advertising. And R. J. Reynolds spends a little over a billion dollars a year advertising and promoting its products.

Q. Mr. Ulmer also said that one of the factors that should be considered in whether a product was unreasonably dangerous was the ability

of the user to avoid risk. How can a user of cigarettes in the manner in which the manufacturer intends them to be used lessen or avoid the risk of lung cancer, Dr. Burns?

A. The only way that an individual can avoid the risk of lung cancer is to stop smoking cigarettes and to avoid secondhand smoke.

Q. And by definition, he would cease to be a user by doing that?

A. I think that that's a fair statement, yes. You would have to stop using the product in order to reduce your risk.

Q. Has anyone told a person, ever, from the tobacco industry how you can safely use this product, how you can buy it and use it and not come under the 40 percent mortality problem?

A. As the product is currently configured, there is no safe variant of that product.

Q. Have you ever seen anything from the tobacco industry telling you the amount of cigarettes that you should smoke?

A. No.

Q. Is there -- we talk about drug abuse and alcohol abuse, consuming too much. Is there any such thing as consuming too much cigarette as far as

the product is marketed?

A. No, there is no safe level of consumption of cigarettes.

Q. Once you start, can you even control the amount that each individual would consume? In other words, if I wanted to say I wanted to start and smoke two a day or five a day; could I do that?

A. We find that people can control individual cigarettes. That is they can say I'm not

going to have this cigarette at this moment in time. But it is almost impossible for them, over a longer period of time, to say I'm going to go from smoking two packs of cigarettes to smoking one. They almost always creep back up to that two-pack-a-day habit over a period of time.

Q. Do you have an opinion, Dr. Burns, as to whether R. J. Reynolds has acted as a reasonably prudent manufacturer or as a reasonable person would act in its marketing of cigarettes during the period from 1960 to 1989?

A. Yes, I have an opinion.

Q. And what is that?

A. I believe that they have not acted reasonably.

Q. And in what ways have they not acted

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reasonably, Doctor?

A. I think that if you are manufacturing a product that has this degree of hazard, you have two obligations. One is you need to tell people what the hazards are. And in my belief, specifically, they should say the diseases that it causes, not that the Surgeon General says this, but we as the company are telling you this. And they need to tell people that this product is addictive. And thirdly, they need to actively advertise and promote in ways that don't take new people and make them smokers.

Those things are imperative if you are manufacturing a product that is both addictive and kills 40 percent of the people that use it. The second thing that you need to do is you need to work hard to mitigate the damage. You need to try and develop products that are really safer. And the way we do that in our society is not only do you work to develop it internally, you share that information publicly so other people can help. And then you present it to an external group. You present it to the Food and Drug Administration. To some other group so they can validate whether the change that you made actually reduces the risk.

These -- R. J. Reynolds has done neither

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of those things, and I think those are unreasonable behaviors on the part of the company given what we knew in public health and what they knew about the evidence over the last 50 years.

Q. From the standpoint of risk utility, Dr. Burns, how would you characterize the risk associated with smoking, compared to any other product you know of on the American scene?

A. The risk is off the scale. It is the largest cause of morbidity and -- largest cause of preventible morbidity and mortality in the United States, bar none.

Q. And from the utility standpoint, what utility does a cigarette have other than to someone who is already addicted on it?

A. Principal utilities of the cigarette is the relief of addiction and the adjustment of people's internal feelings that are based on the addictive character of the nicotine.

Q. If a person never smoked, would they miss

anything, Doctor?
A. No, they absolutely would not.
MR. MERKEL: Indulge me just a moment, please, Your Honor.
(Pause.)

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Q. (By Mr. Merkel) Dr. Burns, just a couple of other matters, and I'm through. You mentioned something about 20-pack years in some of your statistical references.
A. Yes.
Q. Would you explain to the jury what a "pack year" is just so they'll know what that term means?
A. A pack year is a way of quantifying how much total someone has smoked over their lifetime. And it simply is a measure of how much in packs per day they smoke now multiplied by the number of years that they've smoked. So if someone smokes one pack a day for 40 years, they have 40-pack years. If someone smokes two packs a day for 20 years, they also have 40-pack years of smoking. So it's simply a way of quantifying both the amount that they smoke per day, and the length of time that they've been smoking.
Q. Show you, Doctor, Plaintiff's Exhibit 1 and just ask you to quickly flip or look at that and tell us if you can identify that.
A. This appears to be Mr. Nunnally's medical record.
Q. Are these the medical records that you

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reviewed in reaching your opinions as to the cause of his -- the type of disease he had and the cause of it?
A. Yes.
MR. MERKEL: We would offer P-1 into evidence at this time, Your Honor.
JUDGE CARLSON: Any objections?
MR. ULMER: No, Your Honor.
JUDGE CARLSON: It will be marked and received into evidence.
(Exhibit P-1 marked and received into evidence.)
Q. (By Mr. Merkel) I've handed you another document. Is that P-2?
A. P-5.
Q. What is that document, please?
A. This is a death certificate for Joseph Nunnally dated September 1st, 1989 with the cause of death being --
MR. LISTON: May it please the Court, we're going to have to object to him reading from that until it's in evidence.
JUDGE CARLSON: I agree.
MR. MERKEL: Your Honor, we would offer the death certificate of Joseph Nunnally into

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evidence.
MR. LISTON: And we object, Your Honor, like to be heard.
JUDGE CARLSON: Let it be marked for ID purposes, as soon as we go ahead and get through

direct examination of Dr. Burns.
MR. MERKEL: Your Honor, I have nothing further of Dr. Burns.
JUDGE CARLSON: Let me do this, Mr. Ulmer, before we get started. I know you haven't been back in the jury box but about, I guess, 20 minutes, since I sent you back to take up one matter of law very quickly. But we've been out here working the whole time for about an hour. At this moment, I'll give you a short recess, and everybody out here take a break. And we'll go forward. Let me go ahead and mention to you while I'm thinking about it, you've already observed more than one time probably when I have to let you go back in the jury room while I took up a matter outside your presence.
And let me assure you there's no effort by the Court or the lawyers or the parties to try to hide relevant evidence from you. But sometimes I have to take up matters of law outside the presence

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of the jury. Many times, and hopefully most of the time, you will actually here me make decisions of law when I overrule or sustain objections and deal with matters here in open Court in your presence. And those are matters of law that I can go ahead and rule on. Sometimes under our rules of procedure, I have to send the jury out to make sure as to what the issue is.
It might be something that might not be relevant evidence, and -- but it's not an effort to hide relevant evidence from you. And I tried to explain times my role and your role, the jury's role. And that is sometimes I'll have to take up matters of law outside your presence. Just like you, on the other hand, when you go back in the jury room, when you get the case for deliberation, we'll be able -- you'll be able to deliberate in private outside our presence. You decide the facts outside our presence. We can't be back there in the jury room with you. On the other hand, sometimes I'll have to decide law outside your presence. I hope you'll bear with us. And I can assure you I'll try to cut that to a minimum as far as sending you out of the courtroom during the course of the trial. But let's go ahead and take a short break before we

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go forward, and I'll give you about a 10 or 15-minute break.
(Jury exits courtroom.).
JUDGE CARLSON: Let's go ahead and take up this matter.
(Plaintiff's Exhibit 5 marked for identification.)
JUDGE CARLSON: Let's go ahead and take up the issue of Exhibit 5 or P-5, the death certificate. There's an objection. It's marked for ID purposes. I've got a copy.
MR. LISTON: I just want to look and see.
JUDGE CARLSON: Is there, indeed, an objection to P-5?
MR. LISTON: Yes, sir, it is. We object to a part of P-5, Your Honor. And that's the part

that has the cause of death. And as the Court will note there, they list the cause of death as bronchogenic carcinoma. And the grounds of our objection is that that's not admissible under the Mississippi Rules of Evidence as an exception to the hearsay rules under MRE83, I believe it's 6 and 9, either one.

Prior to the adoption of the Mississippi Rules of Evidence, the introduction of vital

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statistics, birth, death, marriage, et cetera, was governed by Mississippi Code annotated section 41-57-9. And these rules of evidence really pretty well follow that statute. But the statute states that it's prime fascia evidence of the facts stated therein. This cause of death, bronchogenic carcinoma, is not a statement of fact. It's a conclusion and an opinion. And, therefore, it wouldn't be admissible either under the statute or under the Mississippi Rules of Evidence.

The -- the certificate of death is signed by a person who -- a doctor who never saw or examined Mr. Nunnally. Mr. Nunnally was seen by an emergency room doctor after collapsing in his vacation cottage in Florida. And the person that signed this record never saw him. And obviously, according to the information that we have, which was an investigative report that is required to be filled out by the -- by the medical examiner.

And we would like to present that to the Court that doctor's name and medical examiner was Dr. Sybers, you can't hardly read his name and signature there. But it's obvious from this information that Dr. Sybers got the information that he used to put the cause of death down from talking

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to the family. And perhaps talking to the ER doctor who got the information that Mr. -- Mr. Nunnally had lung cancer. But the cause of death is not investigated at all.

We don't know whether he died from heart attack or whatever. He did have cancer at that time. But there's no evidence of fact that that was the cause of death. And this is a mere opinion conclusion not supported by the investigative report. And I'd like to mark this investigative report as an exhibit to this motion. It's been certified.

JUDGE CARLSON: For the record that won't be going to the jury.

(Exhibit 6 marked for identification.)

JUDGE CARLSON: What's the response, Mr. Merkel?

MR. LISTON: I wasn't through yet.

JUDGE CARLSON: That's my fault, Mr. Liston. I thought you were through, and I called on Mr. Merkel.

MR. LISTON: I have to be sure I get through before Mr. Merkel gets up. Because if I don't, I won't have any time left. Your Honor, the problem with this is that there's no basis

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whatsoever, factual basis, to show that this man's

cancer, whatever kind it was, was the cause of his death in September 1989. You have the investigative report there, and it's obvious what happened is this medical examiner talked to Mrs. Nunnally talked to the ER doctor. The ER doctor then called Dr. Lawson who is the oncologist here in Tennessee or in Memphis. And they were told -- these doctors were told that Mr. Nunnally had lung cancer.

And they put that down as the cause of death. And there's a Mississippi case that that's pretty well directly on point, "Massachusetts Protective Association versus Cranford" recorded in 1027 at 171. And in that case, the Court said that the predecessor to the code section that governs the admissibility of these, that those things that are on the death certificate that indicates anything other than the immediate primary cause of death is inadmissible and not proper. And those things that do that are not admissible.

Let me just read. The Court says, "We do not think the statute was intended to authorize certificates to be introduced as prima fascia evidence except as to the prime physical cause of death." And that just -- that doesn't meet the

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test. No question that he had lung cancer, but nobody has proven that that's what caused the manner death on that date. Consequently, that's simply an opinion, and not a fact and should be excluded.

JUDGE CARLSON: Any response, Mr. Merkel? Let me just -- I know, obviously, the cause of death, the immediate cause of death. But I think -- as I understand it, we're going to hear, as it's hotly in dispute, we're going to hear other witnesses both from the Plaintiffs' standpoint and the Defendant's stand point as to the cause of death.

MR. MERKEL: I don't know, Your Honor, that we're going to hear anybody else on the cause of death. There's plenty of other evidence that will come in from experts and from medical records as to what he had. What the disease was, and that's all this says, but rule 8034, of course, takes medical diagnosis or treatment out of the hearsay exception, and 8039 states quite simply, "Records or data or compilations of vital statistics in any form, if the report thereof was made to a public officer pursuant to requirements of law."

This is certainly -- fits all those criteria, and the document, itself, doesn't -- I

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would have thought from what Mr. Liston said, that it left some question about what the primary cause of death is. But on the line, very first line, it says, "bronchogenic carcinoma."

I don't know where else you would put something above that or more specific in detail. Because the other lines are due to -- due to or a consequence of, due to or a consequence of something else. That is the primary cause of death as it is set up on that document. This isn't like, you know, something and third way down the thing, it has a consequence of something else. That's what the

document says. That's all I can say. I mean, it's the exception to hearsay under 803.

JUDGE CARLSON: It will remain marked for ID purposes, and I can look at it at the appropriate time. I don't think at this point it's going to be shown to the jury or anything, so it will be marked or ID purposes. Let's take about a 10-minute break here in the courtroom.

(A short break was taken.)

(Jury enters courtroom.)

JUDGE CARLSON: All right. Mr. Ulmer may cross examine.

CROSS EXAMINATION BY MR. ULMER:

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Q. Thank you, sir. Dr. Burns, you'll remember, I believe, several months ago we came out to San Diego and took your deposition.

A. Yes, you did.

Q. And San Diego is your home or at least that general area?

A. Yes.

Q. Now, when we took your deposition, I believe you charged us $6,000 for a day-and-a-half of testimony.

A. Yes, I charged you $500 per hour.

Q. $500 an hour?

A. That's correct.

Q. That's your standard charge in matters such as this now; is it not?

A. That is correct.

Q. And when did you leave from San Diego to come to Hernando?

A. I did not leave from San Diego. I left from Washington D.C.

Q. What day did you arrive here in Hernando?

A. I believe Tuesday evening.

Q. Tuesday evening.

A. Late Tuesday evening, yes.

Q. And you -- you have testified in many

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other cases against the tobacco companies, have you not?

A. Yes, several.

Q. And you've been in many of is the so-called Attorney General cases which are against the tobacco companies?

A. That's also correct.

Q. And that would include the Mississippi case?

A. Yes.

Q. Did you work with Attorney General Moore?

A. Yes, I did.

Q. And Dick Scruggs?

A. That's correct.

Q. You were in the Florida case?

A. That's also correct.

Q. The Washington case?

A. Yes.

Q. You've been in the case, the "Ingalls" case, I believe, that's on going down in Florida?

A. That's also correct.

Q. Did you testify in the or involved in the "White Anderson" case in New York?

A. No, I was not.
Q. Now, you've either testified either in
1188
Court or by deposition more than 50 times?
A. I don't have a -- a number. I'm perfectly willing to accept that you have done a count.
Q. Okay. Now, let's -- we've talked about your consulting work and -- litigation consulting work, this kind of work up to this point. I want to switch gears a little bit with you and talk about your work for the university of California at San Diego. You are a professor there?
A. That's correct.
Q. And you -- is that a public or a private institution?
A. It's sort of a combination of the two. It's a -- in a sense, it's privately charted. But it is a state-funded organization. So it has a separate charter with a separate board of directors, but it receives substantial funding from the state.
Q. And I assume you're on a salary there?
A. I receive a salary through the university. I have to generate that salary through contracts and grants.
Q. Okay. That was what I was going to get to. Because of your work in this smoking and health field since you've been involved in since about,
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what, 1974?
A. Approximately, yes.
Q. You -- because of your involvement in that work, there are grants and contracts that are given to your university?
A. I'm not sure quite what you're saying. The -- the process of receiving a grant is you apply to an agency that gives grants. And you submit an application. It is reviewed in competition with other applications. And then if your grant is meritorious enough, you receive the money.
Q. But you get -- your institution has grants from the state of California?
A. That's correct.
Q. United States government?
A. That's correct.
Q. And is your salary that you make from the University of California at San Diego supplemented from some of those grants?
A. Well, you're somewhat confused, I think. There is no state funding for my salary. I am a full-time member of the faculty. But I am obligated to provide my own salary through the work that I do as contracts and grants.
Q. So you are actually paid from those
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contracts and grants?
A. Certainly.
Q. And do these contracts and grants that you apply for and that you receive, do they run into the million dollars -- millions of dollars each year?
A. They don't run been quite that high. But they run into certainly substantial amounts of

money, yes.
Q. And all of these relate to your work in the smoking and health field?
A. At the moment, they do, yes.
Q. Now, you do consulting work with lawyers such as Mr. Merkel and Mrs. Nunnally. You work at the University of California at San Diego, and you're paid through these contracts and grants. And I think you also told the jury that you do consulting work for the Surgeon General?
A. That's correct.
Q. And are you paid for the consulting work that you the do for the Surgeon General?
A. I -- in general, no. The work that I do as a senior reviewer, I'm not paid for. Recently, I have been paid for some of that work. Because I've been asked to edit some of the documents.

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Q. Now, you spend most of your time on tobacco-related matters, don't you?
A. Approximately 90 percent of my time currently. That's a change from the past.
Q. And you spend more time on litigation, that is lawsuits, than patient care?
A. That's probably true currently. That's not an aspiration, however.
Q. Not an aspiration, but it's a reality?
A. It's a reality, that's correct.
Q. And you've never testified for R. J. Reynolds, I assume?
A. I don't believe so.
Q. And you've always testified against the tobacco company regarding causation of disease?
A. I'm not quite sure what you're asking. I have -- I have only once testified for a tobacco company. That was for Liggett. Because they had changed their behavior in response to admitting the truth. And admitting addiction and placing addiction on the warning labels. In the punitive damages phase of the "Ingall's" trial, but other than that, I have never testified for a tobacco company.
Q. But my question to you was: You've

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always testified against the tobacco company regarding causation of disease, and the answer to that is yes, is it not?
A. In those instances where I've testified on disease-related matter it has been my opinion in each case, I believe, that cigarette smoke can cause that disease, yes.
Q. In all of these cases that you've testified in, you've always testified that smoking caused the Plaintiff's illness, injury or death where that was the issue in every one of those cases?
A. Yes. If I had the opinion that it didn't cause the disease, it would be unlikely that the attorney for the Plaintiff would put me on the stand.
Q. Well, in the "Butler" case, the barber that died down in Laurel, Mississippi, the case was tried last summer?

A. That's correct.
Q. You were actually retained in that case, but you did not testify?
A. I did not testify in that case.
Q. That was a so-called secondhand smoke case?

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A. That's a secondhand smoke case.
Q. And in the Dunn Wiley case?
A. Yes.
Q. That was a secondhand smoke case?
A. That was.
Q. And you actually testified in that case, did you not?
A. I did.
Q. Let me change the focus here for a minute and let's talk about another topic. You believe that people can stop smoking, and many people have successfully stopped smoking, do you not?
A. I do.
Q. In fact, you've testified in this very case right here in the Joe Nunnally case, that you have no reason to believe that Joe Nunnally could not have quit smoking. And as a matter of fact, he stopped following his surgery in Houston. You gave that surgery, did you not?
A. That's correct. There's no absolute prohibition to his being able to stop.
Q. And regardless of what we call it, the fact is that smokers quit smoking cigarettes. You've testified to that effect, have you not, but not to that effect, but those exact words?

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A. I didn't follow your question. I apologize.
Q. It's my fault, I'm sure. You've testified that regardless of what we call it, the fact is that smokers quit smoking cigarettes.
A. Certainly smokers quit smoking cigarettes, yes, that's correct.
Q. And in this country, there are 45 to 50 million people that quit smoking. You've testified to that, have you not?
A. Yes.
Q. And almost half the people who have ever smoked have been able to quit.
A. That's right.
Q. That's true, isn't it?
A. That's correct.
Q. And the Surgeon General in the 1988 report, in the 1988 report was the report on addiction, was it not?
A. It was.
Q. Were you involved in the writing of that report?
A. I was not an author of that report. I was the senior reviewer.
Q. So your involvement was as a senior

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reviewer to the 1988 report?
A. That's correct.
Q. And in that report for the first time, the Surgeon General made the -- came to the

conclusion or consensus, whatever it's called, that smoking was an addictive behavior?
A. That's correct.
Q. And in the 1964 report, on the other hand, the Surgeon General concluded that smoking was habit or habituation. That was the phraseology used in the '64 report?
A. Phrase used in the '64 report was "habit," that's correct.
Q. In the '64 report, that report was written by a select group of scientists that the Surgeon General put out there and everybody agreed upon, I believe.
A. That's correct.
Q. And in the '88 report, you were a senior reviewer.
A. That's correct.
Q. Senior reviewer. Are there other -- were there other people involved in the 1988 report that are involved in tobacco litigation on the Plaintiffs' side?

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A. I'm not sure what you're asking.
Q. Other expert witnesses for the Plaintiff that were involved in the writing or the editing of the 1988 report?
A. I don't know.
Q. You don't know. Now, in that '88 report that you were involved in, it was found that approximately 90 percent of former smokers reported that they quit smoking without formal treatment programs or smoking cessation devices. That statement is in the report, is it not?
A. That's correct.
Q. And you view a Surgeon General's report as a consensus statement, do you not?
A. I do.
Q. And if the Surgeon General says it, that is the consensus of science at that particular point in time?
A. Yes, in context, but yes.
Q. In context, I agree with that. And if you say something or the Surgeon General says something, what should the jury believe, not believe or disbelieve, but where would more credibility lie, in your statement, or in the statements of the Surgeon General?

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A. Well, I think that would depend on the context. The Surgeon General's reports of a specific point in time.
Q. Okay.
A. If the -- if science has moved on from that point in time, then the opinions would be different. I don't believe I have opinions that are substantively different than those of the Surgeon General's reports at the time that they were written.
Q. So your opinions would coincide almost exactly with the Surgeon General's opinions at the point in time where the report was issued?
A. At the point in time in which the report was issued, if the statements are taken in context,

yes.
Q. Now, you testified that one of the major underlying motivations for people quitting is the health effects of smoking cigarettes.
A. That's correct.
Q. Now, we -- I think we talked a little bit about this with the jury, but not a lot. You described to Mr. Merkel that smoking in the first part of this century, when they invented the cigarette making machine, it started up.

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A. Uh-huh.
Q. And then at some point it reached a peak, and then it started down. Prevalent smoking is on the down swing at this point in time, is it not?
A. The prevalence of smoking at this moment in time is flat. It has been flat for approximately the last six or seven years. The per capita consumption of cigarettes is again declining. It had been flat for the past several years. Those are two measures that are somewhat different. One is the percentage of the population who smoke cigarettes. And the other is the total number of cigarettes smoked divided by everybody over the age of 18.
Q. Maybe I -- I may have mixed a word up. But the smoking prevalence among white men in the United States in the early '50s was 50 percent, and now it's somewhere in the range of 25 percent; isn't that right?
A. That is correct. Between 1950 and in now, there has been a substantial reduction in the prevalence of smoking by white males.
Q. It's going down?
A. Yes. It went down. It is now relatively flat for the past, oh, six or so -- six or eight

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years.
Q. Now, you would -- tell the jury whether you would agree with this statement or not that quitting smoking significantly reduces the risk of lung cancer as compared to the risk of someone who continues to smoke. You will agree with that, do you not?
A. I would agree with that statement.
Q. In fact, you've written on this statement before, have you not?
A. I have.
Q. And there are a number of Surgeon General reports that deal with this?
A. Absolutely.
Q. And in fact, the 1981 Surgeon General's report that I mentioned to the jury this morning, it reports or states that after 10 years of cessation, quitting, that the risk of cancer begins to approach that of one who never smoked. That statement is in the 1981 Surgeon General's report, is it not?
A. That statement -- well, I believe it's in there. That statement is certainly consistent with what the information was in 1981.
Q. All right, sir. If Mr. Nunnally had stopped smoking in 1978, that's 10 years before the

1200

diagnosis, he was diagnosed with cancer in, I believe, November of 1988 -- if he had stopped in 1978, would you agree that, more likely than not, he would not have been diagnosed with lung cancer in 1988?

A. Yes, if he had quit smoking 10 years previously, his risk would have been reduced by more than half. And, therefore, it is more likely than not that he wouldn't have developed lung cancer. At least at the time at which he developed it.

Q. Let me change the slate one more time. I'm going to change the slate four or five times, and then we'll be done.

A. I'll try and stay up with you.

Q. Okay. I bet you can. When we came out to take your deposition, we asked you to provide us with materials that had been provided to you by the Plaintiffs' attorneys, including all the depositions that you had reviewed, and you had seen the depositions of the family members, Ms. Gideon, Larry Gideon, Cable Nunnally, Marion Nunnally James G. Nunnally and Kay Nunnally, I believe.

A. Yes.

Q. I tried to, as we went through the depositions, document what you had actually seen.

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A. I believe I gave you a complete list at that time of what I had seen.

Q. You have been provided with no other fact witness depositions other than these family members that I've just described?

A. I believe I saw a deposition of one of the treating physicians.

Q. All right.

A. Other than those, no.

Q. Yeah. Fact witness depositions as opposed to medical depositions was in my question.

A. I did not appreciate that distinction. I apologize.

Q. Have you been made aware of the deposition or the expected testimony of Kirk Barnes or Jimmy Fisher or Ms. Pauline H. Harris?

A. Not that I'm aware of, no.

Q. If Ms. Harris testified in her deposition that she taught Joe Nunnally the dangers of smoking when he was in the 5th grade, you would have no basis to disagree with that at this point in time?

A. No, it would not surprise me if she did.

Q. It would not surprise you that she did?

A. It would not surprise me that a teacher would that do?

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Q. And Kirk Barnes and Jimmy Fisher testified that Mr. Nunnally would from time to time use the phrase cancer sticks and coffin nails to describe the cigarettes, you would, again, have no basis to dispute that with the jury?

A. No, I wouldn't.

Q. And if Jimmy Fisher testifies in this case or testified in his deposition, that in high school Joe Nunnally watched a film about smoking and the hazards of smoking, again, you could not dispute that today?

A. No, I wouldn't dispute it, and it would not surprise me that it would happen.
Q. Okay. Now, the -- the jury heard about the '64 Surgeon General's report this morning and subsequent actions of Congress. Rather than belabor that point, can we agree that in January of 1961, the advisory committee to the Surgeon General issued the report, that the report was transmitted to Congress at some point in time?
A. '64, I believe.
Q. Did I say --
A. You said '61, I thought.
Q. '64 is what I meant to say. And was delivered to Congress?

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A. Yes.
Q. And in 1966, the Congress passed the Federal Cigarette and Labeling Act?
A. That's also correct.
Q. And you know about the warnings, and the changes in the warnings over the intervening years?
A. Yes, I do.
Q. Okay. Was there anything inaccurate about those charts this morning?
A. I didn't have a chance to see them. I was sitting over there. But I have no reason to expect they were inaccurate.
Q. Okay.
A. Is this one more slate? Good. You want to get two more now?
Q. We've got more than two but not a lot.
A. I knew you weren't telling me the truth.
Q. No, I'm going to tell you the truth. I'll tell you this, I'll be quicker than Mr. Merkel. How about that?
A. That would be good.
Q. Dr. Burns, we have made -- would you agree with this, that we have made a decision as a society that the use of tobacco justifies the risk?
A. I am not sure that I would agree with

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that statement out of some kind of context.
Q. Let me hand you your deposition just so you can make sure that we're together on this.
MR. ULMER: May I approach, Your Honor?
JUDGE CARLSON: Yes, sir.
Q. (By Mr. Ulmer) Look at page 262. Borrow these notes back out of there.
A. 262, you said?
Q. I believe it's 262?
MR. MERKEL: Your Honor, may we approach the bench a moment while Mr. Ulmer is looking for whatever he's looking for?
(Off-the-record discussion at bench.)
JUDGE CARLSON: Objection will be noted and overruled.
Q. (By Mr. Ulmer) Do you see the question and the answer there in the middle of the page?
A. The questions that I see are question: "And our society similarly decided for better or worse that cigarettes are and should be a legal product?" My answer was: "That's correct that the sale of cigarettes are something that our society in

this moment in time, has decided should continue and should be restricted to adult use. I support that statement." Question: "Our society has made that

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decision notwithstanding its understanding of the risks, that medical risks imposed by cigarettes. It has made that decision about the legality of the sale with the understanding of the risks that accrue?" "That's correct."

Q. Thank you, sir. Let me ask you this: This is not a complete and clean slate but a carry over from the question and answer that you just gave. And talk to you about why people smoke. People -- people report that they smoke because it reduces stress, do they not?

A. They report that it reduces stress, that's correct.

Q. And some people say they like the flavor of cigarettes?

A. Some people say they like the flavor of cigarettes.

Q. And some people say that cigarettes help relax them?

A. That's correct. That's a form of relieving stress, yes.

Q. Some people with report that smoking helps them in social situations?

A. That is also correct.

Q. And some people report that they perform

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tasks better or work more efficiently when they're smoking?

A. They report all of those things, that's correct.

Q. And some people say that they smoke because it's enjoyable and pleasurable?

A. That's also something that people report, that's correct.

Q. Now, I asked you the question about smoking and the -- and the decision that society has made. And that knowing the medical risks, society has made the judgment that cigarettes should be sold. We've made the same judgment about alcohol, have we not?

A. I'm not sure what you're saying. We've made a much more complex judgment about alcohol.

Q. Well, did you or not testify in your deposition in this case that, "We have made the same societal decision that the use of alcohol justifies the risk?"

A. Alcohol is a legal product in our society, yes. We have, as a society, kept alcohol as a legal product.

Q. And didn't you say at page 261 that the use of alcohol justifies the risk?

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A. I don't think I said that out of some kind of context.

Q. I understand.

A. There are benefits of alcohol, yes.

Q. Okay.

A. And there are risks of alcohol, and they don't accrue to the same individuals. And,

therefore, you have a disparity between the benefits. There are cardiovascular benefits, for example, in terms of reducing cardiovascular mortality. There are disease consequences and societal consequences, automobile accidents, et cetera, for very heavy use. So one instance you have moderate use allowing people the benefit. And then you have disease caused by extensive use and damage to society caused by extensive use. And the decision there is a much more complex one. Because you're talking about whether or not individuals who are using it appropriately should be restricted from access, because other individuals use it inappropriately. It's a very different issue with alcohol.

Q. The Surgeon General has reported that 15 million people meet the criteria for alcohol abuse, alcohol dependence or both, hasn't it?

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A. That's correct.

Q. And --

A. It's a terrible problem.

Q. And the Surgeon General has reported that approximately -- alcohol causes approximately 200,000 deaths a year.

A. I'm not sure it's quite that high. But it may be some estimates that go that high. Depends on what you include as alcohol deaths.

Q. Let me talk to you about some other consumer products that -- well, I don't need the -- I don't need the chewing tobacco, but you know, people -- or the snuff, I can find some, probably, over there. But people enjoy chewing tobacco?

A. People report enjoying chewing tobacco, that's correct.

Q. And there are risks associated with chewing tobacco?

A. Yes, an increased risk of oral cancer among others, yes.

Q. And there's a warning on the chewing tobacco pack, is there not?

A. There is.

Q. And there's a warning on the can of beer?

A. Yes, I believe there is.

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Q. And there's a warning on the bottle of whiskey?

A. In many states there is, yes.

Q. And the warning on the bottle of whiskey doesn't say anything about how much you should drink, does it?

A. No, I believe it cautions against over use and use of pregnancy.

Q. Doesn't it caution against operating machinery or other mobile equipment?

A. I'm not familiar with the specific wording on the warning.

Q. Does the bottle of beer, wine or whiskey, does it say you may get cirrhoses of the liver?

A. I don't know. I don't believe so.

Q. Does it say that some people, when they start drinking, you know, will be an alcoholic? Does it say anything like that?

A. I don't believe so.
Q. And then, you know, when we talk about risks and benefits and the judgments that society has made, society has made the judgment about chewing tobacco --
MR. MERKEL: Excuse me, Your Honor. I don't think we're talking about any judgment society

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has made. The question is for this jury about risks and benefits. I don't know who "society" is. We object.
JUDGE CARLSON: It will be noted and be rephrase that question.
Q. (By Mr. Ulmer) When we talk about the risks and the benefits associated with products, there are risks and benefits associated with alcohol, with snuff, with handguns and products such as that, are there not?
A. There are.
Q. And you know, just a simple thing like if I want a pack of M&Ms, you know, do you think you have the right to tell me what utility I get from that pack of M&Ms? Or do you think that I have the right to make the judgment myself?
A. Well, as M&Ms are currently configured. I think that it's perfectly appropriate that you have access to those M&Ms. If those M&Ms contained cyanide, then I'm not so sure that I would agree with you that you ought to have access to being able to eat them. To compare products like cigarettes with its history deeply embedded in society, and its enormous disease cost to a product like M&Ms is really trivializing the amount of damage that

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cigarettes cause.
Q. I tried this morning to describe to the jury about tar and nicotine, and I probably didn't do a very good job with it. But let's talk about tar for a minute, the type of tar that comes from the burning of a cigarette?
A. Yes.
Q. And I think that it's made up of all the particles in the cigarette less the water and the nicotine?
A. Technically, what it is is all of the particulate matter that is extracted by a certain kind of filter after you remove the water vapor and the nicotine.
Q. And the bulk of the evidence suggests that it is the component of the cigarette that is the one that is toxic or carcinogenic substances?
A. That's correct.
Q. And you've testified that tobacco tar is what causes lung cancer?
A. That the chemical tar carcinogens in tobacco tar are what cause lung cancer, that's correct.
Q. And you agree that reducing the amount of tar that is actually delivered to a smoker is a very

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desirable thing?
A. Yes. If the reduction is a reduction to the person who's actually smoking, then that's a

benefit.
Q. I thought my question was very precise, at least I tried to make it precise. That reducing the tar in a cigarette that is delivered to the smoker is a desirable goal. Is that -- is that correct?
A. The distinction that I think is important is that the benefit only derives, if there is a reduction of the exposure of that individual smoker's lungs to those toxic and carcinogenetic substances. And so we need to be clear as to what we're talking about when we talk about a benefit. Because there has been great confusion over the last 40 years about that specific issue.
Q. Nicotine naturally occurs in tobacco, does it not?
A. It does.
Q. And people -- you testified that the people smoke for nicotine, not tar.
A. That's correct.
Q. And you've also testified that the nicotine has "minimal" toxicity, I believe.

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A. The -- the evidence suggests that long-term use of nicotine would have modest toxicity principally related to pregnant women.
Q. All right. And do you agree in -- I believe it's the 1964 Surgeon General's report, the advisory committee said that nicotine "probably does not represent an important health hazard." That statement is in that the report, is it not?
A. I believe that it is in that report. It is referring to nicotine in isolation rather than the role of nicotine in maintaining smoking behavior.
Q. But to kind of put an exclamation point behind nicotine, and its toxicity or lack of toxicity, you have worked for a number of years for a drug company on an inhalant of nicotine, have you not?
A. No, not on an inhalant of nicotine. I've worked for several pharmaceutical companies that are currently producing products to help people quit that contain nicotine in those products. The companies that I've worked for and the areas that I've worked in principally have been related to the nicotine gum and patch. Those companies are, indeed, manufacturing, currently, inhalers of

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nicotine for purposes of trying to help people stop smoking.
Q. Whatever the purpose, and I'll give you the purpose, you have worked on nicotine nasal sprays and inhalants for at least one drug company?
A. I've not specifically worked on those issues. I've worked on the issues of nicotine. And I certainly have talked to those companies about potential benefits of the inhalers. But I haven't -- I'm just trying to be clear. I haven't specifically worked on a study that involved those particular products. I support them. I think they're good products. I think they're an advance in terms of smoking cessation, and I certainly would

have and would suggest to the companies that that's a good route for them to take.

Q. Let me go to another issue right now. You would agree, would you not, that the most common tumors that are found in the lung are metastatic neoplasms to the lung?

A. Again, that's a -- that's a complex question to answer outside of context. If one takes, in isolation, okay, an abnormal x-ray with multiple tumors on that x-ray, it is more common that that is metastatic disease. If one takes an

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isolated x-ray with one area involved, with one principal abnormality on the x-ray, then in that setting, it is more likely that it is lung cancer.

Q. Well, you've been asked this question before. There's probably not a question you haven't been asked before. But do you recognize "Doll and Hammer" as authoritative in the field of pulmonary pathology?

A. That is a textbook of pulmonary medicine.

Q. Yeah. And in that textbook, doesn't it say that the most common tumors found in the lung are metastatic neoplasms to the lung?

A. Yes, and I'm trying to be clear about what that means. If one looks at a pattern on a chest x-ray, and you see multiple tumors in the chest in an individual, the most common cause of death is metastatic disease. If one sees a single mass, a single area involved, the most common cause of that is lung cancer.

The most common cause of all cancers present within the chest cavity is metastatic disease. But there isn't a huge confusion, in general, between primary and metastatic disease in the lung.

Q. Now, the reason -- and metastatic cancer,

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what we're talking about is cancer that starts in one site and moves to another; isn't that right?

A. That's correct.

Q. And it can do that by the blood system?

A. It can do that through the blood system or the lymphatic system.

Q. Through the lymphatic system. Is it true that the entire blood supply passes through the lungs every so many hours?

A. That's correct.

Q. The -- I want to talk to you about the age of onset of lung cancer.

A. Yes.

Q. And in both smokers and nonsmokers, the most common age of developing lung cancers is in the 60s and 70s, is it not?

A. The most common age by number of cancers that occur is the late 60s and early 70s. Lung cancer risks as a rate as a number of people per hundred thousand in smokers, for example, goes up steadily until the -- about 80 or 85. And the U.S. mortality statistics, the numbers peak out as a rate, I believe, in the 70 to 75-year-old group for males.

Q. Do you agree that the average age of

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onset of lung cancer is the seventh decade in nonsmokers, light smokers and heavy smokers, and have you so testified?
A. The most frequent --
Q. Just answer and then -- yes or no if you can and then explain. I don't want to put you off, but yes or no.
A. Well, as you phrased it, it's a little imprecise. There's not an average that would be described that way. The most frequent onset of lung cancer is the late 60s and early 70s.
Q. Do you agree that 10 to 15 percent of all lung cancers are not caused by smoking, and have you so testified?
A. Approximately 10 percent are not -- well, it's actually approximately about eight percent now are thought to be causally attributed to other factors, yes.
Q. And less than 10 percent of lifetime smokers develop lung cancer?
A. Actually, it's a little higher than that. But it's about in the range of 15 percent, yes.
Q. In the state of Washington case, did you testify under oath that less than 10 percent of lifetime smokers develop lung cancer?
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A. In the older studies, less than 10 percent of people developed lung cancer. As lung cancer has grown in prevalence in society, it is now a higher fraction of the disease. So it depends on which time frame you're making this connection. If you look at the data from CDS 1 from the 1960s to the 1970s, you come up with 10 percent or less. If you look at later data, you come up with a higher number. We're talking about a difference of somewhere between 10 and 15 percent.
Q. Dr. Burns, my question, I'm trying to be precise. I'm trying to use your own language where I can in the interest of getting information before the jury -- the jurors, did you or not testify in the state of Washington that less than 10 percent of smokers develop lung cancer, yes or no and if I need to, I'll get the transcript?
A. I'm perfectly willing to agree that might have been the testimony, and I think that's accurate.
Q. And 90 percent of a pack-and-a-half-a-day smokers will not get lung cancer. You agree with, don't you?
A. I don't recall a specific statement about a pack-and-a-half smokers, but it may well be true.
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What is clearly true is the majority of people that smoke don't get lung cancer, that's absolutely true.
Q. We talked about morning about squamous cell carcinoma. That is a cell type, is it not, the squamous?
A. Yes, it is.
Q. And the squamous cell carcinoma can arise in any -- in a number of organs, can it not?
A. There are squamous cell cancers of a number of organs, yes.

Q. Now, what is your understanding of the alcohol usage history of Joe Nunnally?
A. My understanding is he was a moderate to heavy drinker.
Q. Do you agree that there's a body of literature that shows an increased frequency of lung cancers in that group of individuals who consume large amounts of alcohol?
A. Yes, there's a body of literature that shows there's an increased frequency. It is felt that that enhances the effect of cigarette smoking rather than being an independent cause of lung cancer.
Q. And that body of literature shows an increased instance of lung cancer in people who

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drink more heavily?
A. I thought that's what I just said.
Q. You did.
A. Okay.
Q. Thank you.
A. So I've agreed twice now.
Q. But you know, it -- it doesn't -- if you think about drinking alcohol, you're ingesting it. You're ingesting alcohol, does the alcohol eventually make its way into your bloodstream or blood system?
A. Certainly. That's how it produces its effect.
Q. And that alcohol that makes its way into your blood system eventually makes its way through your lungs, does it not?
A. It does.
Q. Now, are you familiar with this study by Sir Richard Doll and Richard Peto in which they found that approximately 35 percent of all cancers are related to diet? Are you familiar with that study?
A. I'm quite familiar with that study. That's not quite what they found.
Q. What exactly did they find?

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A. What they found was that up to 35 percent might be attributed to diet. They did not have any specific studies that would allow them to define that. But by examining populations in different parts of the world, they hypothesized that up to 35 percent might be attributable to diet. And we know that there are several cancers that are, indeed, affected by diet, including cancers of the breasts and cancer of the colon.
Q. Now, there's a lot -- there's a lot we still don't know about diet and its influence on various cancers; is that a correct statement?
A. Yes, sir, there's a lot that we still don't know about diet and many other science issues, yes.
Q. Now, Joe Nunnally worked at McDonald's for 10 years, I believe, from about 1974 until about approximately 1984.
A. That's my understanding.
Q. And you didn't talk about benzopyrenes today, I don't believe.

A. I did.
Q. Pardon?
A. I did, actually.
Q. You did. I missed it then. Benzopyrenes

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are created when you cook any type of meat, are they not?
A. They are.
Q. And benzopyrenes are carcinogens?
A. Benzopyrenes are carcinogens.
Q. They're very potent carcinogens?
A. They're potent carcinogens.
Q. And you have no doubt that Joe Nunnally was exposed to benzopyrenes when he was working at McDonald's?
A. I think that it is unlikely that Mr. Nunnally was received a meaningful, that is biologically meaningful, exposure to benzpyrenes. Because he was frying hamburgers at McDonald's or working as a manager at McDonald's. I think that's an unlikely circumstance.
As to whether that exposure was zero, it's certainly possible that the grease that popped into the air would indeed have some particles, not most of the particles but some particles would be small enough to get into his lung. So he may have had some tiny exposure. But I know of no evidence that suggests in any way that the benzpyrene exposure that occurs from frying hamburgers. Or for that matter of cooking steaks, or influences the

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risk of developing lung cancer.
Q. When you say you know of no evidence, you're aware of the study in China, are you not?
A. I'm aware of the study in China. That is not frying hamburgers.
Q. It was cooking in confined spaces?
A. It was cooking with charcoal in confined spaces, that's correct. It's a very different problem, and not one that occurs in the United States with any degree of frequency.
Q. Now, you -- we've already talked about your review of the medical records.
A. Yes, we have.
Q. And your -- the fact that you did not actually review the pathology slides nor the actual x-rays. We've talked about that.
A. We have.
Q. And do you remember when Mr. Merkel got up, he asked you a couple of questions. He said, "The physician who was involved that Mr. Ulmer showed the jury a blowup of his testimony that showed it possibly was a sarcoma, I believe a pulmonologist, correct, and your answer was yes, and then he asked this question: Did the pulmonologist the next day or the next day or something in the

1224

procedure after they got back the pathology, did he change his opinion and make a diagnosis, and you said yes, he diagnosed it as bronchogenic carcinoma. Do you remember that exchange?
A. Yes.
Q. And in Mr. Merkel pointed to this exhibit

right here that ended up lop sided, do you remember that?
A. That's correct.
Q. And did you look at the name on this record that Mr. Merkel showed you?
A. Yes, that is the attending physician discharge.
Q. That is Dr. Stephen Alley.
A. Yes, that's correct.
Q. And look at the record, the blowup I showed the jury this morning. Who signed this record?
A. Dr. Blythe.
Q. Two different doctors, is it not?
A. Two different doctors, that's correct. Although if you will look at the top, you will see that Dr. Alley's name is listed as the attending physician for that consultation.
Q. Who signed this report?

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A. Dr. Blythe.
Q. Now, you accepted at face value, did you not, the reports of the pathologist at Methodist Hospital?
A. I did.
Q. But -- well, strike that. No -- was an autopsy done in this case?
A. I'm not aware of one, no.
Q. Are you aware that some of the tissue blocks from which these slides were made were lost by the hospital in Houston?
A. I'm not specifically aware of that, no.
Q. Would that be important to you to know if tissue blocks A8 and C4 which showed the large tumor and the middle lobe tumor, those tissue blocks had been lost?
A. I can't say why it would be, having already said that I didn't review the slides and was not interested in reviewing the slides. I don't see why it would make a difference that additional tissue blocks were not available, at least to me.
Q. I want you -- I want to talk with this jury for a minute about the size of the tumor in the right upper lobe. I believe this tumor was 15 centimeters?

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A. Yes.
Q. And the average size of a bronchogenic carcinoma on presentation is two to five centimeters, is it not?
A. That's correct.
Q. Okay. And it's more common for a bronchogenic carcinoma, a lung cancer that's primary to the lung of the squamous cell nature, it's more common for that kind of carcinoma to present as a smaller lesion, and it's also more common for it to present as a single lesion?
A. More common than what?
Q. Well, I'm reading from your testimony. You said it's more common for the bronchogenic carcinoma to present as a single lesion, and it is also more common to present as a single lesion?
A. I think you said single lesion twice.

But it is more common for primary lung cancer to present as a single lesion. And it is more common for it to present as a smaller lesion. As the cancer grows, it gets bigger. And it is not uncommon for people to present with very large lung cancers.

Q. There was no -- there was no spread of this cancer into the -- the hilar or the -- the

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lymph nodes, give me the right phraseology, the hilar or the noticed --

A. The hilar lymph nodes.

Q. The hilar lymph nodes was there?

A. Not at the time of surgery following radiation, no.

Q. And the most common site of initial spread of bronchogenic carcinoma is to the hilar lymph nodes. You agree with that, do you not?

A. It's common site.

Q. It's usually the earliest route of dissemination?

A. That's a more complex question. It's usually the one we see first. However, even in those people where we take out a small lesion that's lung cancer, half of those people will have had cancer disseminate to other parts of their body. Even though we take out all of the nodes, not all, but a lot of the nodes of the media stynum and see that there's no cancer there.

So in terms of the first one that we commonly see, because we go and look there, it is most commonly found in the nodes of the media stynum. But it is very common for people who have been operated on where we thought we had a chance to

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cure them, when we took the tumor out, we got all of the tumor and all of the nodes were negative, about half of those people in the next year to 18 months will show up with metastatic disease.

Q. Yeah. You said something I want to get some clarification on. When -- when Mr. Nunnally proceeded at the Methodist Hospital in Memphis in November of 1988, and they did the first workup on him before any radiation was done, there was no involvement of the hilar or nodal lymph nodes, were there?

A. Not that I recall at that time, though I don't believe they sampled them directly.

Q. Now, sarcomas are not associated with cigarette smoking, are they?

A. They are not.

Q. Is it unusual for people who have renal cell, which is, I guess, kidney cancer, is it not?

A. That's correct.

Q. Or pancreatic cancer, to have metastasis to occur in the lung?

A. It is not unusual, no. Are we going to get another slate here?

Q. We're doing good.

A. Good. I like it when the pages keep

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turning.

Q. You know what, I do, too. And I know the

jury does. I want to ask you just a few questions, if I could, please, sir, about lower tar and nicotine. I think you said very plainly that it's desirable for the smoker to actually receive less tar?

A. For the smoker's lungs to have exposure to less tar, yes, that would be desirable. That is, indeed, what we are attempting to achieve with cessation, as a matter of fact.

Q. And there was some talk about, you know, how you measure the amount of tar and nicotine. And it's done by way of the FTC method?

A. No, the method that is published on the ads is done by the FTC method. You can measure it with a variety of different other approaches. And it is commonly measured with a variety of different other approaches in order to get closer to the levels that people actually receive when they use the product.

Q. Well, the FTC requires the companies to advertise the amount of nicotine and tar that's in their cigarette products, does it not?

A. No, it requires that they post those

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numbers on their advertising. It does not require that they promote those numbers. It requires that they be posted. That's all.

Q. They've got to post it on the advertisement as opposed to advertising it?

A. As opposed to the promoting cigarettes based on those numbers, that's correct.

Q. So the tobacco companies post the amounts in their advertisements, and the amounts they post is pursuant to the FTC method?

A. The requirement to produce on the ads the measurement of tar and nicotine by the FTC method is a FTC requirement, that's correct.

Q. Now, you -- I think you told the jury that lowering the tar and the nicotine had had no positive health effects.

A. Yes. The recent work that we have done demonstrates that there really is no benefit.

Q. Well, you testified before, have you not, that if you smoke low tar and nicotine cigarettes without increasing the way you smoke, you will reduce your risk?

A. That's correct. We thought -- we thought for quite some time that that, indeed, would occur. We hoped that that was going to happen. It has not

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happened, and we now have an understanding of why it didn't happen. The reason why it didn't happen is people didn't get less exposure to their lungs from the tar as they smoke cigarettes that delivered less tar to machines.

Q. Well, do you remember testifying, what, only a year ago in the state of Washington AG case?

A. That's correct.

Q. And let me just finish my question, if I could, then you can answer.

A. Okay.

Q. You testified in the state of Washington case a year ago that smoking low tar and nicotine

cigarettes, without increasing the way you smoke, will reduce your risk. That if you smoke filtered cigarettes without increasing the number, you will have anywhere from a 10 to 20 percent reduction in risk.

So what is -- I'm a little confused, Dr. Burns. You gave that testimony under oath in the state of Washington a year ago. And you come to this courtroom, and you tell the jury something entirely different.

A. Well, actually, I didn't tell the jury something entirely different. If you read my

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testimony in the state of Washington, I made it very clear --

Q. I have.

A. -- that I thought there was minimal or no reduction in the risk. What you read is technically accurate. If people don't compensate for the diminished amount of nicotine they're getting, then they have a reduced risk. If they smoke less, their risk is reduced. What has changed is that we now have a clearer understanding of two things. How people compensate. And secondly, the degree of risks from those same studies that demonstrated that 10 or 15 percent reduction in risk when you correct for the increasing number of cigarettes smoked per day by the individuals in those studies as they shifted to lower nicotine cigarettes, the risk reduction goes away.

So there isn't, at this moment in time, evidence that's -- that suggests that there's any benefit to shifting to smoking these lower tar and nicotine cigarettes.

Q. Well, in -- are you familiar with the report of the Surgeon General in 1981 entitled "A change in cigarette"?

A. I'm very familiar with that.

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Q. You were involved in writing that report, were you not?

A. I was one of the editors and writing writers of that report, that's right.

Q. And the 1981 Surgeon General's report, and I'm quoting now -- said that "Smoking cigarettes with lower yields of tar and nicotine reduces the risk of lung cancer and to some extent improves the smoker's chance of longer life provided that there is no compensatory increase in the amount smoked. However, benefits are minimal in comparison with giving up cigarettes entirely. The single most effective way to reduce the hazard of smoking is to discontinue smoking." You agree with that statement, do you not, as late as "Ingall" only a few weeks ago, do you not?

A. I agree with that statement then, and I agree with it now. Of the difference is now we do know that people compensate. And they do so in a way that maintains their ingestion of tar. While if they could do something they can't do, they would have derived a benefit. Because they can't do it, they don't derive the benefit.

Q. Well, the 1981 Surgeon General's report

talked about compensatory behavior, did it not?

A. Yes, it did.

Q. Now, you've testified that smoking is responsible for some 400,000 odd deaths, I believe you said.

A. I have certainly said that in the past. I don't believe I've said it today. But that's certainly true.

Q. The -- this figure is, of course, not -- not derived from any kind of autopsy reports, or medical records or anything of that nature, is it? It's a statistical construct?

A. No, it is derived from medical records. It is derived from U.S. deaths from lung cancer. And then those deaths from lung cancer are -- among lung cancer and the other diseases caused by smoking are matched up to the smoking behaviors of the U.S. population to estimate the fraction of people in those deaths that were caused by cigarette smoking.

Q. Do you agree that mean age of death for a nonsmoker as of 1988 was 78.5 years approximately?

A. I apologize. I don't have a memory that is sufficient to retain that kind of detail of information. I think it's probably quite accurate. But I can't tell you whether it is or isn't with that degree of precision.

Q. Do you agree that the mean age of death for a smoker as of 1988 was approximately 73.2 years approximately?

A. That seems like an approximately correct number.

Q. In fact, you have testified before in Mississippi that the average age of death of the nonsmoker was 78 and somewhat shorter for the smoker in the "Wilkes" case, did you not?

A. That would certainly be my understanding of that the data, yes.

Q. So if you testified under oath in "Wilkes" that the average age of death of a nonsmoker was 78, would that refresh your memory when I asked you a minute ago about the mean age of death of a nonsmoker is approximately 78?

A. I'm perfectly happy to agree that it's 78. I just don't have a discreet recall of a single year, and a single number to that degree of precision. But you know, it's somewhere around there, yeah.

Q. Now, let me ask you just a final grouping of questions, if I could, and then maybe take a short break, with the Court's permission, to consult with my colleagues?

A. Is "final" the same as "last"?

Q. Close. If you would -- if your question -- your answers were as short as my questions, we'd be done.

A. We'll try. We'll try.

Q. You had testified, Dr. Burns, on many occasions that there's no such things as a safe cigarette.

A. As they're currently manufactured,

there's no such thing as a safe cigarette, that's correct.

Q. That you can't make a safe cigarette that burns tobacco. You agree with that statement, don't you?

A. That's correct.

Q. And there's no safe level of consumption?

A. That's also correct.

Q. It's your opinion that all cigarettes on the market are defective and unreasonably dangerous?

A. All cigarettes that are on the market as currently configured are unreasonably dangerous, yes.

Q. You currently testified that there's no reasonable substitute for cigarettes. And none of the cigarettes on the market would have altered Joe

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Nunnally's risk?

A. I'm not sure I would agree that there is no reasonable substitute for cigarettes. Many people, most people, for that matter, live life without cigarettes. And therefore, it's not an essential characteristic. There are products that can replace the nicotine in people. There is no product that is approved for long-term use that would deliver nicotine to someone in replacement for cigarettes as it -- as we currently have approvals from the FDA. So at this moment in time, there's no -- besides the cigarette, there's no other chronic long-term available delivery system for nicotine.

Q. It's your opinion that cigarettes should not be banned or made illegal?

A. That's correct.

Q. You have never supported making the sale of cigarettes to adults illegal?

A. That's also correct.

Q. You think it would be wrong to ban the sale of cigarettes to adults?

A. I think it would be inappropriate to ban the sale of cigarettes to adults. I think that that's something that adults have the right to make

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a decision on.

Q. And you think that people should be free to smoke, if they choose?

A. I think that if people can smoke responsibly, not injure others with their smoking, for example. That they should -- they should be allowed to smoke, that's correct.

Q. Well, I think you testified under oath in the state of Washington that you think that people should be free to smoke if you choose. And do you agree or disagree that you gave that testimony in the state of Washington?

A. I a glee with that. I'm just placing that in context. I don't agree people have a right to smoke anywhere they want, any time they want without regard to who else is around them. I do think they have the had a right to maintain that behavior.

Q. In fact, you've worked in California with groups to ban smoking in certain outside places?

A. I -- that's correct, yes.
Q. And if you, Dr. David Burns, had the regulatory authority to ban cigarettes, would you do it or not?
A. At this moment in time, given the context

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with which cigarettes exist in our society, I would not ban the sale of cigarettes at this moment in time, no.
Q. If an adult chooses to smoke with knowledge and appreciation of the health consequences, do you agree that he should bear the consequences of his actions?
A. I think that they do bear the consequences of those actions.
Q. Now, final thing before I'd ask the Court for a short break, if I could.
JUDGE CARLSON: All right, sir.
MR. ULMER: It may be the final thing altogether.
A. That would be good.
Q. (By Mr. Ulmer) Do you agree with this statement, Dr. Burns, that people who smoke cigarettes do, indeed, suffer the consequences of that behavior. And they are, indeed, responsible for their own behavior. The fact that they're addicted does not free them from their other responsibilities in life. You agree with that, don't you?
A. I agree with that statement, that's correct.

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Q. And you agree with that because you testified to that effect under oath before?
A. I agree with it because I believe it to be true. And I have testified to it under oath because I believe it to be true.
Q. Do you, in your workup in this case, do you know of any evidence that's been presented to you that Joe Nunnally tried to quit smoking at any point in his life?
A. No, I don't have any evidence of that.
MR. ULMER: Your Honor, would the Court indulge me just a minute, few minutes perhaps?
JUDGE CARLSON: All right. Yes, sir. This is a good time for a break, ladies and gentlemen. You've been in place about an hour and 10 minutes. Let's go ahead and take a short break at this time.
(Jury exits courtroom.).
(A short break was taken.)
(Jury enters courtroom.)
JUDGE CARLSON: Mr. Ulmer.
MR. ULMER: I have no further questions, Your Honor. Thank you.
JUDGE CARLSON: Redirect?
MR. MERKEL: A little bit, Your Honor.

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REDIRECT EXAMINATION BY MR. MERKEL:
Q. Dr. Burns, Mr. Ulmer asked you, I think when he first gave you that great big book to look at and read a question that was something about what society had determined or something?

A. That's correct.
Q. And I think from your answer it turned out that what he was talking about was whether it was something was legal or illegal?
A. That's also correct.
Q. And would you tell us or tell the jury, please, what the tobacco industry has done since 1954 to keep this product legal? What kind of lobbying and expenditures they've made to accomplish that purpose?
MR. ULMER: Your Honor, that violates a ruling made by the Court on an in limine motion.
MR. MERKEL: Mr. Ulmer brought the issue up.
JUDGE CARLSON: On what basis, Mr. Ulmer?
MR. ULMER: Under the -- it was a motion filed in limine with respect to any lobbying activities by the tobacco industries. That motion, if I'm not badly mistaken, was granted. And I've not brought up anything about anything like that.

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At least if I have, I am badly confused.
MR. MERKEL: Your Honor, he injected the legality of it into this the record which has nothing to do with anything here other than to make an argument that it's legal. And now why it's legal is certainly relevant.
JUDGE CARLSON: I'll permit it. I'll overrule the objection.
A. The tobacco companies have, for 50 years now, conducted a concerted public relations campaign to deny that cigarettes caused any disease. To deny that it was addictive. They have lobbied at every level of government, from the federal governments to the state governments to the local level to block actions to restrict the sale of cigarettes to minors. To limit where smoke exposure can occur. To develop and promote effective tobacco control efforts.
They have, throughout this entire period, maintained extensively in public and lobbied aggressively to promote the concept that cigarette smoking doesn't cause disease. Is not toxic, even to nonsmokers, and is not addictive. And all of those efforts have been intended to maintain both the legality of the product, and its widespread

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acceptance and distribution.
Q. Does, Dr. Burns, the fact that it is still legal, have anything to do with its relative risk versus its relative utility?
A. No, not as far as I can understand.
Q. You were giving -- you were asked something about the fact that at some point in the past, I think, you had said that nicotine, itself, was not a carcinogen, or did not lead greatly to the cause of lung cancer. And you were continuing, and Mr. Ulmer kind of cut it off and moved to another point. I think you said nicotine in isolation.
A. That's right.
Q. And that was as far as you got. Would you explain to the jury what you were going to show about nicotine and isolation versus in reality?

A. Well, the principal toxicity of nicotine is because it's addicting, and because in cigarette smoke you have all the toxic and carcinogenic substances in proportion to nicotine that the nicotine, itself, perpetuates a person's daily compulsive, regular use of the cigarette.

And so its toxicity relates to the hold that it creates on the smoker that maintains that five, 10 puffs a cigarette, 10, 20, 30, 40

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cigarettes a day, seven days a week, 12 months a year, you know, 30, 40 years, that's where the toxicity of nicotine comes in. And it's a companion or carry along of the tar.

Q. He was asking you questions about metastatic lung disease and the number of lesions and things of that nature. In this particular case, Dr. Burns, there were two lesions. I think one in an upper lobe, one in a middle lobe. And some reference to the fact that the pathology on those showed that there were a different type of cells in those two different lesions. Do you recall --

A. Yes.

Q. -- the pathology to that effect?

A. Yes.

Q. Is that any indication whatsoever that they came from two different sources?

A. No. That's a very prominent occurrence when you have growth within the lung or locally extension of the tumor.

Q. And when you say that most commonly upon presentation a tumor is -- I forget the centimeters, five centimeters -- was that the figure?

A. Two to five centimeters.

Q. Why is that the most common presentation?

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A. Because they have to be big enough to be found. And when you find them, you treat them. So if you wait, they become bigger. The principal reason why small tumors are identified is that sometimes they are very proximal in an airway that is close in to the trachea. And, therefore, they block off a part of the lung and create a ammonia or create an irritation like a cough where you cough up some blood. And that brings you into the doctor where it's found.

If it's farther out where it doesn't block off a big part of the lung, then it can get quite large before you develop the symptoms that bring you into the doctor. And Mr. Nunnally's principal symptom, unfortunately, was this large weight loss that he had, and that's usually a very late symptom in the development of a cancer as it grows.

Q. If we allowed any of the normal two to five centimeter lesions to continue to grow for a period of time before something was done, either radiation or resection, would they grow to 15 centimeters?

A. Most of them would, yeah. You would either die first or they would grow to that size.

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Q. So as far as what that's significant of

as between the type of tumor it was, and the fact that it had been there a long time, which is significant?

A. Simply means that it had been there for a long time. It was a rapidly growing tumor in all likelihood. And it had been there for long enough to grow to this size.

Q. Now, there was some discussion about the fact, and I didn't get all the percentages, eight, 10, 15, back and forth for quite a while about the percentage of cancer, lung cancers that occur to nonsmokers.

A. That's -- that's right.

Q. And I'm not interested in which percentage with which study. But what causes the cancers in nonsmokers?

A. There are a variety of causes. The principal ones are environmental tobacco smoke, asbestos exposure, radon exposure. And then there's a series of other occupational exposures, such as exposure to cook oven emissions, benzpyrene and roofing tar, arsenic, nickel and a few other agents that can cause lung cancer in people. The reason why there's only so few is that we've been

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successful in controlling those other exposures and eliminating them.

Q. So would it be fair to say that as far as lung cancer is concerned, it is caused almost universally by the introduction of some contaminant, or pollutant or toxic substance of some sort?

A. Yes. It is the clearest demonstration we have that you don't get lung cancer just because you're getting older. You get it from an exposure to a carcinogen.

Q. Was there any exposure to any other of these carcinogens in the case of Joe Nunnally?

A. None that would be considered any kind of substantive or meaningful exposure.

Q. Now, there was another study that Mr. Ulmer mentioned to you, and then left in a hurry. And that was something about China and charcoal or something.

A. Yes.

Q. Would you go on and explain whatever to the jury there is about that thing that you were not able to.

A. Well, in the studies of environmental tobacco smoke, there is a difference between studies that have been done in mainland China and Hong Kong

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from studies that are conducted in other parts of the world. One of the principal differences, in particularly the northern provinces of China where these studies have been conducted is that people have a tradition of cooking with charcoal and heating oil in very enclosed spaces that become enormously smoky.

In those settings, that type of exposure is probably the reason why those women, nonsmokers, have increased lung cancer risks. That type of exposure simply doesn't happen in other parts of the world. You don't have that kind of intense

long-term over somebody's entire lifetime exposure to this very dense charcoal and other constituent smoke as part of your day-to-day life. It isn't that there aren't other things that can cause lung cancer. It's that those other things are not exposures that normally occur.

Q. Is there any correlation of that China charcoal situation to being the manager of a McDonald's store?

A. No, I don't think so. And I have a feeling that McDonald's would take fairly great umbrage at being compared to that environment. I mean, that's a pretty oppressive environment to have

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to live and work in -- in northern China.

Q. Now, you and Mr. Ulmer were in and out two or three times of the issue of reduced tar.

A. Yeah.

Q. And has there been any way devised to reduce tar without reducing nicotine?

A. Yes.

Q. Okay.

A. What you can do is you can add nicotine to the cigarette. When you add nicotine to the cigarette, people smoke less, they reverse compensate. Because you've got more nicotine and, therefore, they're exposed to less tar. The tobacco companies have known that for many years. But have never manufactured those type of cigarettes, because they the didn't want to have to address the issue as to whether the nicotine in it was really addictive. And so by denying, publicly and maintaining the posture that nicotine wasn't addictive, it prevented them from using an approach that might actually have reduced tar to people.

Q. So as far as reducing with filters all of the smoke content and reducing tar and nicotine at the same time, does that effectively reduce the tar being received by the smoker at all?

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A. No, it doesn't. The smoker most all -- essentially all conventional cigarettes have the same ratio of tar content in the smoke to nicotine content in the smoke. So when the smoker changes the way they smoke in order to preserve their ingestion of nicotine, in order to get the nicotine they need to maintain their addiction. Along with that nicotine comes the same dose of tar. So when they switch to these products, it doesn't change their exposure.

Q. So when you prefaced one of your answers to Mr. Ulmer that actually reducing the tar to the individual, that's different from reducing the tar on Mr. Ulmer's chart?

A. Absolutely. The car on Mr. Ulmer's chart is the tar delivered to a machine. Machines don't get lung cancer. The only way you're going to reduce the lung cancer currently is to deliver less tar to people. And if you design cigarettes so that they deliver a very low level to the machine but a full level to people, you're not going to change the lung cancer risk of using that product.

MR. MERKEL: Thank you, Dr. Burns.

That's all I have, Your Honor.
JUDGE CARLSON: Dr. Burns --

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MR. MERKEL: We would ask if he might finally be excused.
JUDGE CARLSON: You are finally released, Dr. Burns. I appreciate that.
MR. MERKEL: Thank you, again, Dr. Burns.
THE WITNESS: Thank you.
MR. MERKEL: Your Honor, our next witness would be by deposition Dr. William J. Fidler. And Mr. Dodson, with the Court's permission, will read the questions. And I'll read Dr. Fidler's answers, and if you would explain to the jury what we're doing.
JUDGE CARLSON: All right. Ladies and gentlemen, in just a moment, you'll hear testimony by way of a deposition of a doctor. You are familiar with depositions, probably, and have heard reference to them. And basically under our rules of civil procedure, testimony can be preserved in lieu of having a witness come to Court live and testify, and certainly is common especially with doctors who may be it's difficult to get them away from their patients long enough to come to Court to testify.
And so the way say in this instance the testimony of a doctor would be preserved would be for the lawyers to the parties to talk to each other

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and contact the doctor, the doctor's representative and get a time date and place of venue for the doctor to submit to a deposition. And when that takes place, and lawyers for all the parties are present, I'm sure in this case lawyer for Plaintiff was present, lawyer for Defendant was present. The doctor was put under oath to testify truthfully and then subjected to examination by the parties. A court reporter was present to the take down the testimony of the doctor and put it in writing, and so the way this will come to you -- one way it can come to you is by way of a reading of the deposition. So in this instance, as I understand it, Mr. Dodson will be the attorney asking the question of the doctor, and Mr. Merkel will play the role of a doctor and read his responses verbatim. He can't stray from the deposition. He has to read verbatim from the deposition.
MR. LISTON: Your Honor, we have filed some objections to portions of Dr. Fidler's deposition. They have been filed with the Court and served on Plaintiff. You want to just take them up as we get to it?
JUDGE CARLSON: Yes, sir, and if I could -- where is a copy of that? Let me just see

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it.
MR. LISTON: One was filed on March the 1st and --
JUDGE CARLSON: Where is a copy of the document?
MR. LISTON: I can get one.
JUDGE CARLSON: As you can tell, just like any other witness, even one live, there might

be some objections to rule on.
JUDGE CARLSON: Mr. Dodson.
DEPOSITION OF DR. FIDLER READ INTO THE RECORD
Q. Dr. Fidler, my name is Jonathan Engram, and I, along with Mr. Ulmer here, represent R. J. Reynolds Tobacco Company in a lawsuit filed by Kay Nunnally who is the widow of Joe Nunnally. Dr. Fidler, I'm going to show you what's been identified as Exhibit 3 to your deposition. And state for you that that page 16 came from Plaintiffs' second supplemental response to Defendant R. J. Reynolds Tobacco Company's first set of interrogatories, ask that you review paragraph 9 as it relates to you.
A. That's correct.
Q. Have you ever seen that before today?
A. This?

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Q. Yes.
A. No.
Q. Did you have any contact between yourself and the Plaintiff counsel before this the expert disclosure was prepared as it relates to you?
A. Not that I know of.
Q. So those were not the words that you conveyed to the Plaintiffs' attorney in this case?
A. That's correct.
Q. Okay. Did you know you had been identified by the Plaintiffs' attorney as a treating physician and may be called in this case either live or by deposition?
A. Not treating physician. I helped diagnose the lung cancer. I did not treat the person.
Q. The reason we're taking your deposition is because you have been identified as a physician who was involved in the care of Mr. Nunnally, and as a person who may be called to testify at a trial of this case. Have you given a deposition before?
A. Yes.
Q. You understand, then, that your answers are under oath?
A. Yes.

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Q. And you understand that part of the rules are that I'm going to ask you questions, and you're going to answer them. And that if you don't understand the question, I need to know that during the course of the deposition, so I can clarify a term that I used or rephrase the question that I asked you?
A. I understand.
Q. If there is something that you don't understand, I would ask that you stop me and point that out. Otherwise, I will assume that you have fully understood my question. I also ask that you don't speculate about your answers. If you need a break or anything, just let me know, and we'll be glad to stop. Where do you currently practice medicine?
A. At Methodist Hospital Systems of Memphis.
Q. And how long have you been practicing medicine here?

A. 22 years.
Q. Did you bring a CV?
A. Yes.
Q. Do you practice near a group?
A. Yes.
Q. And what is the name of that group?

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A. Duckworth Pathology Group, Incorporated.
Q. How many times have you been deposed before, Dr. Fidler?
A. Probably 4.
Q. And in those four instances, what kind of cases were they? Were they medical malpractice cases?
A. Yes.
Q. Were you an expert witness for one party or the other?
A. Once.
Q. And the other three times, what kind of cases were those?
A. They were cases about wrongful deaths on which I had done autopsies or examined surgical specimens.
Q. They were civil cases for wrongful death or criminal cases?
A. Civil.
Q. And one time that you testified as an expert witness's, was it in a medical malpractice case?
A. Yes.
Q. Was that a failure to diagnose case?
A. Yes.

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Q. Who did you represent?
A. I represented the defense.
Q. What was the name of the failure to diagnose case, or do you remember who the doctor was who was sued?
A. I don't recall offhand.
Q. And was that filed here in Memphis?
A. It was filed in Knoxville.
Q. Do you remember the law firm that retained your services?
A. I remember the name of the lawyer who retained my services, Ted White. But that's not the name of his law firm.
Q. Is Mr. White an attorney in Knoxville or Memphis?
A. Knoxville.
Q. And you stated that you've been deposed four times. Have you ever testified at trial?
A. Three times.
Q. Were those in the same four cases or in additional cases?
A. Once in Michigan, that was a criminal case. Let me go back on that. In Michigan, I testified in a criminal case, in a case in which I had done an autopsy. And I've testified in Memphis

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in one case involving a surgical specimen that I had examined. And I testified in another case in Memphis regarding an autopsy that I performed.
Q. What was the issue in the Memphis case

where you testified about a surgical specimen that you reviewed?
A. A woman had her leg amputated and claimed that her primary care physician failed to diagnose gangrene in a timely fashion.
Q. I take it, then, you have never testified in any litigation involving a tobacco company?
A. That's correct.
Q. And have you ever been consulted in any such litigation?
A. No.
Q. What did you do to prepare for this deposition?
A. I read the material that you have been over.
Q. Okay.
A. Reviewed the slides and spent an hour reading a book.
Q. The material that you've reviewed was that sent to you from Plaintiffs' counsel?
A. I believe this material came from -- came

1259

along with the slides.
Q. Is this your fax number, 901-587-9720?
A. I don't think so. That may be one of them here.
Q. It says here Methodist Central Pathology.
A. Okay. Perhaps this came from David Cook, perhaps David.
Q. Okay. Looks like Mr. Cook got it from Mr. Merkel.
A. That's probably true.
Q. Do you know, doctor --
MR. DODSON: Wait a minute.
MR. MERKEL: 24.
Q. Part of the materials, then, that you had received other than cover letters and indexes of the pathology slide, you have received the expert witness disclosure statement of Sanford Barski?
A. Yes.
Q. Do you know Dr. Barski by reputation?
A. No.
Q. Have you read any of his published literature?
A. Not that I know of.
Q. You received the expert witness disclosure of Dr. Thomas Bennett. Do you know

1260

Dr. Bennett by reputation?
A. No.
Q. Did you know him when he was a Mississippi State Medical Examiner?
A. No.
Q. You've also received a pathology report dated November 23rd, 1988, med express paper?
A. Yes.
Q. And you received a pathology report from Methodist Hospital, Houston, Texas, which I'm going to say is a three page document, includes two pages reviewing surgical pathology. And then a third page that reviews the seven slides prepared here at Methodist Hospital, Memphis.
A. Yes.

Q. You received some itemization slides?
A. Yes.
Q. You also received a copy of the discharge summary from Methodist Hospital of Memphis.
A. Yes.
Q. It's dated November 29th, 1988, and then you received two pages of radiology reports. One was a CT of the head dated 11/25/88 and one CT of the chest dated 11/21/88?
A. Yes.

1261

Q. And you've not reviewed the radiology, itself, have you?
A. No.
Q. And then you received some two pages of progress notes and physician's orders from Methodist Hospitals of Memphis.
A. Yes.
Q. And then there's a cumulative summary in computer form that includes reference to the pathology?
A. Yes.
Q. Report from Methodist Hospital of Memphis. And then there's another copy of the Methodist Hospital report. Okay. Then you reviewed the seven slides prepared here in Memphis, as well as the 46 slides prepared in Houston?
A. Yes.
Q. Spent one hour reading what book?
A. A book on the pathology of lung tumors.
Q. Who was the author of that?
A. Hammer, Dale and Colby.
Q. What chapter did you read?
A. Chapter 1 and probably chapter 4.
Q. Did you read the chapter that -- hold on a second. Which edition did you read, the second

1262

edition published in 1994?
A. I think.
Q. Did you read Dr. Dale and Hammer's chapters 33 on sarcomas?
A. No, the book I reviewed had only five chapters. Its an abbreviated version of their larger textbook.
Q. Did you discuss this case with Plaintiffs' counsel before you prepared for your deposition, before you appeared for your deposition, I'm sorry?
A. Very briefly.
Q. What did you discuss with them during that meeting?
A. I asked him a question or two about Dr. Barski, glanced at a prior deposition he had given in a different case, made mention of the fact that our secretary knew the deceased in this case in high school. That's about all. We only spoke for about three minutes.
Q. Do you remember which case it was that Dr. Barski had given a deposition in?
A. No.
Q. Well, what was the subject matter of the testimony that you glanced over?

1263

A. His curriculum vitae, where he worked and what he has done.
Q. Other than that three minute meeting with Plaintiffs' counsel, I assume that took place immediately prior to your deposition today?
A. Yes.
Q. Have you had any telephone conversations with either Mr. Merkel or Mr. Dodson?
A. Mr. Dodson, I had a phone conversation with him on 2/1 for 10 minutes.
Q. And what was the subject matter of that?
A. He asked if I would agree to review the slides regarding the case.
Q. Okay. Anything else discussed?
A. No.
Q. You read -- excuse me, you reviewed, and let me show you this, we've marked this for purposes of the deposition as Exhibit Number 1. I'll ask you if you can identify that for the record.
A. Yes.
Q. What is Defendant's Exhibit 1?
A. This is a copy of a report on a lung aspirate of Joseph Nunnally dated 11/23/88.
Q. That was a report prepared here at Methodist Hospital, Houston?

1264

A. Correct -- no, Methodist Hospital of Memphis.
Q. Excuse me, thank you. Let me hand you what we've identified as Exhibit, Deposition Exhibit 2, and ask you if you've seen this before?
A. Yes, I have.
Q. That's the pathology report and supplemental report from Methodist Hospital, Houston, from February 1989; isn't that right?
A. Yes.
Q. Now, do you know Dr. Leslie Alpert by reputation?
A. I do not.
Q. Were you told at any time by Plaintiffs' counsel that Dr. Alpert had been deposed in this case already?
A. No.
Q. So you have not reviewed her deposition testimony in this case?
A. No.
Q. Was February 1st the first time that you were made aware that you were going to be asked to be involved in this case?
A. Yes. Let me tell you how I came about.
Q. Okay.

1265

A. I believe that Merkel and Dodson had tried to contact Dr. Courington to gets her deposition or discussion. She called David Cook at the Hardison law firm, and said she didn't want to do it. She said Fidler's name on it. Call him. David called me and asked if I would talk to Mr. Dodson when he called. And to my recollection 2/1 is the first time I spoke with him.
Q. Do you have some notes from that telephone conversation?
A. 'Phone 10 minutes,' yes.

Q. The rest of the notes that you have are based on --
A. My review of the slides.
Q. May I look at those notes, please?
A. Sure can.
Q. 1988, how much time did you spend reviewing the fine needle aspirate from Methodist Hospital, Memphis?
A. On this case?
Q. Yes, sir.
A. I have no way of knowing that.
Q. There were no written notes that you had prepared regarding your consultation at that time?
A. That's correct.

1266

Q. Deposition Exhibit 1 under the comment section simply says' consultation by W. J. Fidler, M. D. ' you have no specific recollection of --
A. I do not.
Q. -- that consult? Did you frequently consult with Dr. Courington?
A. Yes, I did.
Q. And tell me at the time what was the relationship between you and Dr. Courington, were you both partners in the Duckworth Pathology Group?
A. We were partners in Duckworth Pathology Group. We both practice cytopathology. My supposition is she reviewed the seven slides from this aspirate and had a question to me. What kind of cancer do you think this is? She may have said is this cancer, and what kind of cancer do you think it is?
Q. It's not what a doctor would call a formal consult then?
A. That's correct.
Q. And you did not sign out this pathology report?
A. I did not.
Q. You never saw the surgical pathology report from Methodist Hospital in Houston two weeks

1267

ago?
A. That's correct.
Q. Did you take any flat photo micrographs?
A. I did not.
Q. How much time did you spend in the two weeks reviewing the FNA from Methodist of Memphis and then the surgical pathology report from Methodist, Houston?
A. 50 minutes.
Q. Now, in your practice, do you review pathology, as well as cytopathology?
A. Yes.
Q. Why is the Exhibit Number 1 on Med Express paper opposed to Duckworth Pathology or Methodist Hospital Memphis?
A. At that time in 1988, the laboratory was known as Med Express Laboratories. I believe at that time it was still a joint venture between Duckworth Pathology and the Methodists hospitals.
Q. Have you talked with Dr. Courington about this case?
A. No.

Q. How much time would you have spent reviewing the FNA and consultation with Dr. Courington back in 1988?

1268

A. Probably no more than 10 minutes.
Q. Would it be something that she would be looking at the slide under a microscope, and call you over and ask you to look at it at the same time?
A. Yes.
Q. And it was your practice when you did that kind of consultation to not document your findings?
A. The documentation is on the report. That would indicate that I concurred with that diagnosis.
Q. What would have been the differential diagnosis for the FNA in 1988?
A. Any kind of tumor or any kind of infectious disease.
Q. Any kind or any kind of nonsmall cell?
A. Well, when you see a fine needle aspirate of the lung done for a lump in the lung, the differential diagnosis includes any kind of tumor and any kind of infection.
Q. But once --
A. Yes.
Q. What was your differential diagnosis?
A. This is certainly not small cell carcinoma. It is certainly not malignant lymphoma. It is not infectious disease. It is a malignant

1269

neoplasm. So then the diagnosis is is it a primary nonsmall cell carcinoma, is it a metastatic carcinoma or could it be a sarcoma.
Q. In November of 1988, (inaudible) chemical standing to rule out the possibility that this was a sarcoma, did you?
A. We did not.
Q. With respect to the 1989 surgical pathology from Houston, what observations did you make in the last two weeks?
A. One slide from the upper right lobe has residual neoplasm.
Q. Which slide is that?
A. A8. B2 also has microscopic residual tumor with radiation changes. Slide C4 from the right middle lobe has a small focus of neoplasm which was negative with a mucus carmin stain. And the lymph nodes, the lymph nodes were heavily pigmented, and the alveoli contained numerous pigmented microphages.
Q. But there was no neoplasm identified in the lymph nodes, were there?
A. None.
Q. When I say I'm referring to cancer or tumor cells.

1270

A. Correct.
Q. You said that C4 was negative for mucous carmin stain. Did you notice another difference in the staining between?
A. I've written down here that the cells have clear cytoplasm with central necrosis and keratin debris.

Q. This is C4?
A. Correct.
Q. With respect to the staining that was done in the hospital in Houston, did you notice a difference between A8 and C4?
A. Yes.
Q. What was the difference with respect to staining?
A. Both were mucous comine negative. The tumor in A8 was purely microscopic in my opinion.
Q. You didn't notice any other difference in A8 and C4 in reviewing pathology slides?
A. Not that I wrote down.
Q. Did you review the slides of the stain with PAS?
A. I reviewed all of them but I didn't make any notes about them.
Q. Wouldn't it be significant if A8 with PAS

1271

was negative, and C4 with PAS staining was positive?
A. I don't think so. It wouldn't make any difference in my diagnosis.
Q. And then with respect to C4 after the digestion, PAS was negative?
A. That would mean that the tumor cells in C4 probably had glycogen in them.
Q. And correspondingly that the tumor cells in A8 did not have glycogen?
A. I don't know.
Q. Dr. Fidler, let me read you some testimony from Dr. Alpert's deposition taken in this case on October 19th, 1999. I asked Dr. Alpert was C4 PAS without digestion positive or negative, and she said positive. The next question was that would indicate at least the presence of glocigen; is that correct?
A. And she said no, PAS positive is not specific. You have to do additional steps. My question then was okay, you had to digest, and her answer is right. And the question then is PAS with digestion, is that positive or negative? And her answer was negative. And then my question was so having done that additional step, did you determine that she was seeing -- what you were seeing at C4

1272

was glycogen; is that correct, and her answer was that was a deduction. And then my question was that's a different result from what you saw in A8; is that correct. And her answer was that's correct.
Q. Do you think that the tumor cells in C4 and A 8 are from the same tumor?
A. Could well be from the same tumor.
Q. Have you ruled out the possibility that the tumor cells in A8 and C4 are from different tumors?
A. I cannot do that.
Q. Would you agree that the presence of cells in C4 in a small nodule would be more consistent with a metastatic lesion than a primary lesion?
A. I think it is a metastatic lesion.
Q. Would you agree that the cells having clear cytoplasm and expressing glycogen would be

something you might find in a renal cell carcinoma?
A. It's a possibility but not a probability.
Q. Why is it not a probability in your opinion?
A. I think that the lesion in C4 had does not look like a renal cell cancer to me.
Q. Let me read from page 78 of Dr. Alpert's

1273

deposition. I asked her, do you have an opinion to a reasonable degree of medical probability or that it is more likely than not whether this is a kidney, primary metastatic lesion? And her answer was at the time I do not recall whether this was discussed with oncologists to inquire as to whether or not there might be a renal lesion. This week when I look at the lesion, I say that you should exclude renal primary. Do you agree with that statement?
A. Well, I'm not sure what her statement means. I don't think this is a renal primary in C4.
Q. Have you done any tests to either rule in or rule out the possibility that C4 is a renal primary?
A. No.
Q. Have you done any -- maybe I'm asking the wrong question. Do you think that C4 represents clear cell carcinoma from some other sight?
A. Besides lung?
Q. Yes.
A. It's a possibility, but I think, again, not probability.
Q. Would you like to look at A8 and C4 again?
A. No.

1274

Q. To see if C4 was positive for PAS for ingestion, you didn't pick that up, did you, Dr. Fidler?
A. I didn't remark on that. I'm taking what you said as fact.
Q. So I take it, then, that you're not of the opinion that the right upper lobe tumor and middle lobe tumor are of different origin?
A. Restate that.
Q. Let me ask it this way: Would you agree that assuming that C4 stain positive for PAS and then was negative after digestion and A8 was negative for PAS before and after digestion, would you agree that this difference in stain means that the upper right lobe mass and right middle lobe nodules are different regions of origin?
A. No.
Q. Would you agree morphologically that the right upper lobe and middle lobe have different cellular cancers?
A. They look histologically different.
Q. And the fact that they look histologically different doesn't affect you are tumors of different origin?
A. It does not.

1275

Q. How many clear cell carcinomas of the kidneys or pancreas do you diagnose in a career?
A. Personally?

Q. Yes, sir.
A. Pancreas as very few, less than two, kidneys, 10 to 15.
Q. Would you agree that metastasize to the lung?
A. They do.
Q. Were you aware that there was a third nodule in the right upper lobe?
A. Only from hearsay and the testimony of the expert defense witness, Dr. Barski, and the other guy, they made some reference to it, and that's the first I've heard of it.
Q. I don't believe Dr. Barski has been deposed in this case, Dr. Fidler, I know for a fact he has not been deposed.
A. Maybe it's the other guy.
Q. Oh.?
A. It's said they're expected to. What's the fellow's name, Bennett?
Q. Okay.
A. He said there he was expected to testify there were three lesions.

1276

Q. Based on the expert witness disclosures in this case?
A. Yes.
Q. Did you pick up that in the x-ray report, the CT of the chest, that there was a mention of the third nodule?
A. I did not see that.
Q. At the time you reviewed the FNA with Dr. Courington, you weren't privy to the x-ray report then, were you?
A. I have absolutely no recollection of that. I may or may not have.
Q. There's simply no recollection on the --
A. That's correct.
Q. -- pathology report that's signed by Dr. Courington that the orders from the treating physician were to rule out sarcoma, or that the CT scan had indicated a possibility of sarcomatous lesion?
A. There's no indication of that.
Q. As you pick that up, let me show it to you. Can we mark this copy that you got? Is that okay with you?
A. Sure.
Q. Let me show you Defendant's Exhibit 4,

1277

and ask you to read -- you can read all of it, Dr. Fidler, but the CT scan in the chest is in the middle of the page. Do you remember reading that before this moment?
A. Yes.
Q. But you did not -- you did not know at the time that this pathology the report was prepared that Dr. Routes opinion was large white upper lobby mass does not have the typical appearance or presentation of bronchogenic carcinoma and possibility of sarcomatous lesion is to be considered?
A. I can't say whether I knew that or not.
Q. Have you read Dr. Alpert's deposition?

A. No.
Q. You understand Dr. Alpert to be the pathologist that was involved in the care of Mrs. Nunnally -- Mr. Nunnally at Methodist Houston?
A. Yes.
Q. Do you know that she reviewed your pathology slides?
A. Yes.
Q. And she issued a report that's the third page of Exhibit 2 to your deposition?
A. Yes, I read this.

1278

Q. Dr. Alpert did not sign out the pathology taken from Memphis as squamous cell carcinoma, did she?
A. Correct.
Q. Do you know that she knew Dr. Courington had originally diagnosed Mr. Nunnally's FNA as squamous cell cancer but she chose not to call it squamous?
A. I did not know that.
Q. Did you write down everything of significance when you took your notes on pathology?
A. Everything I wrote down is on a piece of paper.
Q. Did you not see any squamous metaplasia in any of the bronchial margin resections?
A. Not that I recall.
Q. In the FNA, the first seven slides from Memphis, there is evidence of Kerr to nation?
MR. LISTON: Excuse me, no evidence.
Q. No evidence. In the FNA, the first seven slides from Memphis, there is no evidence of keratinsation, is there?
A. I think there is in one of the slides.
Q. Which slides?
A. I would have to pick it out of the

1279

folder.
Q. In this?
A. I think it is in this one.
Q. The slide is not marked in any way to distinguish it from other slides. What is the smear, what kind of stain?
A. A pentacolo.
Q. And were there two or three pap stains?
A. I think there are. Let's see. That looks like a pap. That looks like a pap. Those two looks like maybe dif quicks, and one of them looks like maybe a H and E to me.
Q. This one has some blue markings looks like a C.
A. Looks like somebody circled something there.
Q. Is that the only slide that has something circled on it from the original FNA?
A. Gosh, I don't know. This one has a mark on it, an ink spot. That one has a green spot on it or something.
Q. Blue circle on his opposed to a spot?
A. Okay.
Q. You would agree with that so we can identify it later on?

1280
A. Yes.
Q. It's an incomplete circle that looks more like a C, doesn't it, Dr. Fidler?
A. Yes.
Q. Did you see any intracellular bridges?
A. No.
Q. What features did you see in the FNA that led you to confirm a squamous cell carcinoma?
A. Looking at those slides, I do not think this is a sarcoma, lymphoma, so the possibility are large cell undifferentiated carcinoma, adenocarcinoma or squamous carcinoma. It does not have a lot of identifying features of any of those. But I think the one slide has areas with thick cytoplasm, nuclei I that have very thick irregular borders and occasion prominent nucleoli. That, I think, looked more like squamous carcinoma, adeno or large cell undifferentiated. In our hospital, when we make a diagnosis of poorly differentiated squamous, poorly differ adeno, that's meant to think clinicians know that's our best shot at a particular cell type.
Q. And you would agree that the FNA was poorly differentiated?
A. Yes.
1281
Q. Which means that the cellular characteristics aren't very definite?
A. That's correct.
Q. Than then you said that looking at the FNA, you did not think it was a sarcoma?
A. Correct.
Q. Did you see any cellular features in any of the pathology materials consistent with a sarcoma?
A. No.
Q. Did you see any hairline fill amounts?
A. No.
Q. Did you see any processes?
A. No.
Q. Did you see any cell cords?
A. In the aspirate, there are some small cords of cell.
Q. Did you see any nuclear palisades?
A. No.
Q. Did you see any ovoid or spindle-like shaped cells?
A. One or two.
Q. Did you see any spindle like nulceochromotin?
A. No.
1282
Q. Did you see any like cytoplasm?
A. No.
Q. Did you see any paint brush handle cells?
A. No.
Q. Did you see any V shaped nuclear arrangement in the cells?
A. Not that I recall.
Q. Did you see any hobnail cells?
A. Not that I recall.
Q. Was there cellular pleomorphism?

A. Yes.
Q. Were there blurry cellular borders?
A. Some.
Q. Do you know Dr. Stephen Hajdhu?
A. Yes.
Q. Did you train with him at Memorial?
A. Yes, I did.
Q. Do you know who his specialty is?
A. Cytopathology.
Q. Do you know whether he has other specialty?
A. Surgical pathology.
Q. Are you familiar with Marty Speedbow's book on cytopathology written by Mr. Hodgdo?
A. I haven't read it for a long time.

1283

Q. Do you know what subject matter it covers?
A. No, I don't, sarcomas probably.
Q. How many pulmonary sarcomas have you diagnosed in your practice on pathology?
A. Probably not more than so. I'll take that back, 25.
Q. All of them you did no special stains to rule in or rule out the possibility of sarcoma, you have excluded it?
A. I feel comfortable with the diagnose of squamous, poorly differentiated squamous carcinoma.
Q. You can't rule out the possibility of a sarcoma, can you?
A. I cannot.
Q. How many cells would you estimate were malignant tumor in the FNA?
A. I'm not going to estimate. I didn't count them.
Q. Do you consult with radiologists when reaching diagnoses in your difficult cases?
A. Yes.
Q. Would you expect that in a 15 centimeter mass in the right upper lobe, would you expect there to be the metastatic cancer to the lymph nodes?

1284

A. Maybe, maybe not.
Q. You don't think it's unusual to have a 15 centimenter right upper lobe mass that's believed to be squamous cell blood cancer and not have any metastatic spread to the lymph nodes?
A. Lung cancer can do almost anything.
Q. Would you agree that it is unusual?
A. Unusual.
Q. Let's go back to the right middle lobe, nodule C4. I think you said they had clear cytoplasm. Would you also describe the cytoplasm as vaculated?
A. I can't recall right now, right off.
Q. Did you find any intracellular bridges?
A. I don't know, I can't recall.
Q. That would be true for both the surgical pathology and the (inaudible)?
A. Correct.
Q. Did you see any keratinization from A8 in the right upper lobe?
A. Did not.

Q. What is it you call keratin debris in C4?
A. I think C4 has necrosis in the middle of the tumor, and the way some of its sustained, it appeared to me to be keratin debris from dead cells?

1285

Q. Was there any keratin stain done on C4?
A. I don't believe so, but I don't recall.
Q. Do you want to look at the slides again and see?
A. No.
Q. Does this look like a picture of C4 to you?
A. Could be.
Q. Well, let me represent to you that it is.
A. All right.
Q. Do you see any evidence of keratin debris in this picture?
A. I see no neucrosis in this picture. However, this cell here with the thick red cytoplasm could be a keratinized cell.
Q. But you don't -- but you can't say for sure without doing further neohistical chemical staining; is that right?
A. That's correct.
Q. I don't think I've asked you this question with respect to C4. Without further staining you can't rule out the possibility that the right middle lobe nodule is clear cell carcinoma, can you?
A. I don't think I can rule it out with

1286

special staining.
Q. Why is it you don't believe, then, that the nodule in the middle lobby is clear cell carcinoma?
A. It may be. It has clear cells there before you could call it clear cell carcinoma. That doesn't mean it isn't a metastasis from the larger nodule.
Q. Does it mean it's a metastasis from a kidney or a pancreas?
A. It does not. That's correct. It mean it is.
Q. Dr. Fidler, wouldn't you agree it is more difficult to diagnosis carcinoma by fine needle aspirate than by a biopsy?
A. Not necessarily.
Q. Fine needle aspirate, isn't reported in medical literature a higher percentage of fine needle aspirate diagnosis that are incorrect, when compared to biopsy specimens?
A. When compared to the thoracotomy specimens, yes.
Q. And the material you received was a fine needle aspirate as opposed to thoracotomy?
A. Here at Methodist Hospital, that's right.

1287

Q. What do you know about Mr. Nunnally's smoking history?
A. One of the reports said he had a 60 pack year history of smoking. Was that Dr. Alpert's? 36-year-old male, 60-plus-pack year smoker. That's what I know about it.

Q. At the time you help Dr. Courington in the cytopathology report, you did not know what his smoking history was?
A. I probably did, but I can't say for sure.
Q. Who would have been the source of that information?
A. The radiologist.
Q. You did not have any contact with Mr. Nunnally?
A. I did not.
Q. Did you see any cavitation in the surgical pathology you reviewed?
A. Most of the residual or most of the tumor was dead.
Q. I understand that. I didn't ask you if you saw any necrosis. I said did you find any cavitation?
A. I didn't see it.
Q. Would you agree with the statement that

1288

the squamous cell commonly cavitate, but that sarcomas infrequently cavitate?
A. That's a reasonable statement.
Q. Dr. Fidler, are you going to offer any opinions in this case regarding the epidemiology of lung cancer?
A. No.
Q. You're not an epidemiologist, are you?
A. I am not.
Q. Did you see in any of the surgical pathology any histo pathologically identifiable changes in the lung tissue that are precursors to the development of squamous cell carcinoma?
A. Not that I recall.
Q. Metamorphopsia apaplysia, metaplasia, dysplasia?
A. I don't recall that.
Q. As a pathologist, you're not called on to determine anyone's lung cancer in any specific case, are you?
A. No.
Q. In this case, you're not going to offer an opinion at trial, are you, that what found in Mr. Nunnally's pathology slides were caused by his cigarette smoking?

1289

A. I don't know.
Q. What more do you need to offer an opinion on that?
A. I guess we can all have an opinion on anything.
Q. Okay. A professional opinion to a reasonable degree of medical certainty, I mean, what I'm trying to find out, Dr. Fidler is are you going to be a causation expert in this case?
A. No.
Q. Would you agree with the statement that most cancer found in the lung is metastatic from nonpulmonary sites?
A. It depends on how you look at it. Most cancer in the lung that I see is primary lung cancer. Most cancer that people see in the lung on autopsy is metastatic. Most cancer we see in the

lung on surgical pathology is primary.
Q. Do you believe that "Dale and Hammer" is an authority that you rely on in your practice?
A. It's one of many.
Q. It's the one that you reviewed before your deposition?
A. Yes.
Q. The reason that the lung is the most

1290

common site for metastatic cancer is because of the flow of blood and lymph nodes to the lungs, the lymphatic system through the lungs?
A. Probably.
Q. Do you know that diagnoses of lung cancer may change -- I guess diagnoses of primary lung cancer may change after autopsy. Is that a common occurrence?
A. Be more specific.
Q. Wouldn't you agree that an autopsy is a check on the accuracy of a clinical diagnosis?
A. Yes.
Q. Do you know what percentages of autopsies reported in the literature alter the previous clinical diagnosis?
A. Usually 10 to 30 percent.
Q. Do you know whether an autopsy was performed in this case?
A. I don't know.
Q. You've not seen any pathology from the autopsy, have you?
A. No.
Q. Dr. Fidler, have you ever smoked cigarettes?
A. No.

1291

Q. I noted in reviewing the articles that you published that none of this them deal with cigarettes; is that correct?
MR. MERKEL: Reread that.
Q. I noted in reviewing the articles that you publish, that none of them deal with lung cancer; is that right?
A. That's correct.
Q. Have you been involved in any community or public health organizations?
A. No.
Q. Would you agree that lung cancer predates tobacco use?
A. Yes.
Q. Would you agree that nonsmokers get lung cancer?
A. Occasionally.
Q. Would you agree that nonsmokers get squamous cell carcinoma of the lung?
A. Occasionally.
Q. Would you agree that lung cancer in a nonsmoker looks the same under a microscope as that of a smoker?
A. Usually.
Q. What do you believe? Well, you said you

1292

weren't going to talk about causation. Strike that question.

MR. MERKEL: Then read the -- the other response there or the comment.
MR. DODSON: Okay. Mr. Merkel, he may be asked questions about it. You haven't asked him a question about an opinion.
MR. LISTON: May it please the Court, we're going to object to him reading. That's not the testimony of the document.
JUDGE CARLSON: I sustain the objection.
Q. Would you an agree that sarcomas are not associated with cigarette smoking?
A. I don't know whether they are or not. I don't think there's enough information available to rule that in or out."
MR. DODSON: This is cross examination by Mr. Merkel.
Q. Dr. Fidler, if we could, do you need a break for a minute?
A. I would like to get some more water.
Q. Dr. Fidler, as you know, I'm Charlie Merkel. I represent the Nunnally family in this matter. You and I met for the first time immediately before your deposition. I'd like to go

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back and start with you in an orderly fashion, so the jury, should they have this deposition read to them, will know how you became involved in the case and your qualifications and so forth. So some of what I ask you will be redundant to what counsel did in sort of a jumping from topic to topic. Would you give us a brief resume of your educational background?
A. I graduated from high school in 1957. I graduated from Washington and Lee University in Virginia in 1961. I graduated from George Washington University School of medicine in 1965. I did an internship in pathology and internal medicine at Grady Memorial Hospital, Atlanta, Georgia. I did a residency in anatomic and clinical pathology at the University of Michigan and finished that in 1970. I was in the service at Madison General Hospital in Washington State until 1972, and I did a fellowship in surgical pathology at Memorial Sloan Kettering Hospital in New York in 1972 and '73.
Q. Let me interrupt you there briefly. Sloan Kettering, is that hospital known for any particular type of specialty?
A. It's memorial hospital for cancer and allied diseases. Then from '73 to '78, I was at the

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University of Michigan medical school, and I've been in Memphis since 1978.
Q. What amount or percentage of your practice or your time is devoted to patient care and actual hands-on pathology work?
A. All of it.
Q. Are you board certified in any areas?
A. I'm board certified in anatomic and clinical pathology, and I have specialty qualifications in cytopathology.
Q. Would you, for the jury's benefit, explain the difference or the distinction between pathology and cytopathology.

A. Cytopathology is the branch of pathology that dealings with the study of cells rather than whole pieces of tissue.
Q. And does it have any particular significance to the cancer diagnosis and treatment?
A. Cytopathology was originally started as a method of diagnosing cervical cancer, but it has branched out into the diagnosis of cancer in virtually all organs of the body.
Q. And when you say "board certified," Doctor, for the jury's benefit, what does that mean?
A. That means I took a test given by the

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American Board of Pathology that certified my competence in a given field.
Q. Are all pathologists board certified?
A. No.
Q. You had a teaching area at the University of Michigan, I believe?
A. Yes.
Q. What were the areas that you were instructing?
A. I taught medical students basic pathology, and I taught residents anatomical pathology and cytopathology.
Q. You brought with you, today, Doctor, I think a CV. Is this up-to-date and pretty current?
A. Yes.
Q. And Doctor, so that the jury might be able to differentiate between your involvement in this case and other medical experts that they may hear briefly, would you explain to them how you became involved in -- I won't call it treatment of Mr. Nunnally but in the overall medical care of Mr. Nunnally?
A. I was asked by Dr. Courington to consult or confirm or help her with the diagnosis on the fine needle aspirate of Mr. Nunnally.

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Q. Who was Dr. Courington for the jury's benefit, and how did she become involved with Mr. Nunnally?
A. She was one of our partners at that time, and she was involved -- charged with the responsibility of reading the slides from his aspirate.
Q. Now, was any of Dr. Courington's work and your work in any way related to medical and legal questions and terminology and so forth at the time you were doing it?
A. I don't believe so.
Q. You've never been retained and paid fees by either side in this the lawsuit to study materials and come up with opinions to support or be an advocate for one side or the other?
A. No.
Q. And the work that you and Dr. Courington did, what was the setting for that work originally? In other words, how did Mr. Nunnally come to be in your presence, and what were you -- what was the objective that you and Dr. Courington had if it you first became involved in this case?
A. Our objective was to make a diagnosis of

the lesion in his lung that was seen on x-ray.

Q. And what is the pathologist's goal in doing that, Dr. Fidler? What are you trying to provide and for what purpose?
A. A correct diagnosis should result in the correct treatment.
Q. And you were called in, I believe I understand, as a consultant by Dr. Courington?
A. Let's say an informal consultant. We do this everyday all the time in our department. If we have any kind of question on a case, we ask one or more of our colleagues.
Q. So that you come up with a consensus among the people that are consulting in that fashion?
A. Yes.
Q. And what was the diagnosis that was made for purposes of the future treatment of Mr. Nunnally?
A. Poorly differentiated squamous cell carcinoma.
Q. So that the jury might understand that term, Dr. Fidler, what are we talking about? If you could go through all the words in that did he have the initial or that diagnosis and give us an idea of how they relate to the overall spectrum of what

could have existed here?
A. Let's start with the word "carcinoma." That means a tumor, a malignant tumor, that has arisen from some epithelial surface in the organ; in this case, the lung. Poorly differentiated means that it was not making keratin to any significant degree, did not show intracellular bridges which is common in poorly differentiated squamous cell carcinoma, nor did it show the features we would look for in small cell carcinoma or adeno or other tumors of the lung.
Q. In squamous cell, what is imparted by that definition?
A. Squamous means plate like. Squamous cell are those that cover skin and other epithelial surfaces. When you look at one under the microscope, it has the resemblance to a plate. They're flat. It's one of the most common types of cancer that occur in the lung.
Q. Now you've been asked several questions earlier today, Doctor, about ruling in or ruling out something. To me and I think to a layman, rule in and rule out would mean to a hundred percent absolute certainty that something was or was not.
I'd like to direct my question to a

different standard, that is what the Courts in Mississippi have required for medical proof, that is that any opinions be given to a reasonable degree of medical certainty or to a reasonable medical probability, that is more likely so than not so.
Did you, in making your initial diagnosis in this case, form an opinion to a reasonable degree of medical certainty or probability as to the type of -- well, to whether or not cancer existed in

Mr. Nunnally's lung, and, if so, what type of cancer?

A. I'm certain cancer existed in his lung, and I'm reasonably certain that it was a squamous cell carcinoma.

Q. And that definition or diagnosis was made by you and furnished to the treating physician so they could plan their care and protocol around that diagnosis?

A. That is correct.

Q. Now, since making that original diagnosis, have you had available to you other pathology specimens and other medical records and so forth, Doctor, that were created after your initial involvement with Mr. Nunnally?

A. Yes, I've reviewed the pathology slides

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and the pathology report from Methodist Hospital in Houston. That operation was done after x-ray therapy was finished. I have no idea how long that took or what amount of x-ray therapy he had.

Q. By the way of a little bit of education for the jury, Dr. Fidler, what is the effect of radiation on tumor cells?

A. The hopeful effect is to kill the cells. In this case, it killed most of them. Many times when cells are not killed, it causes them to Exhibit more pleomorphism, more change in shape, more change in the nuclear shape, more change in the nuclear chromatin content, vacuolization of tumor cells, et cetera.

Q. From the standpoint of making diagnoses or being more confident of your diagnosis, does one have a better chance of a correct diagnosis with examination of cells before or after they have been eradiated?

A. Before.

Q. Taking the fact of eradiation into consideration, as well as the fact that the Houston, Texas, pathology, I believe, came from surgical resection specimens, did you see anything, Dr. Fidler, in the later pathology or in any of the

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medical records or reports that you reviewed that has caused you to question or doubt the accuracy of your initial diagnosis?

A. No.

Q. So as you sit here today with all the knowledge that you possess and have looked at, again, to a reasonable degree of medical certainty or probability, what would be your diagnosis as to the lesion in Mr. Nunnally's chest?

A. I believe our original diagnosis is correct, and I believe that the findings in the resected lung specimen are consistent with squamous carcinoma that has changed because of radiation therapy.

Q. And --

A. Most of it. I think that the lesion in question in the right middle lobe is perfectly consistent with an intrapulmonary metastasis from the original lung tumor.

Q. Now, that was going to be my next

question, Doctor. When we talk about metastasis, what, for the jury's benefit, are we talking about?
A. Metastasis means that a piece of tumor has gone from its primary site to somewhere else.
Q. In this case, where do you believe from a

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reasonable degree of medical certainty or probability that the primary site of this tumor was?
A. In his right upper lobe.
Q. This would have been a bronchogenic, as it's called, carcinoma to begin with?
A. I believe so.
Q. And the middle lobe tumor, you believe, had origin where?
A. I believe the right middle lobe tumor is perfectly consistent with metastasis from the right upper lobe tumor.
Q. And this is phenomena that is frequently found in lung cancers and particularly primary tumors of a fairly large size?
A. Reasonably frequent. Lung cancer can metastasize to the opposite lung or to the same lung.
Q. There's been some question raised, Dr. Fidler, as to whether or not this lesion could have been sarcoma and whether anything that's been done pathologically could to an absolutely certainty rule out that. Again, directing my question to probabilities, what do you believe to a reasonable degree of medical certainty or probability the likelihood of this being sarcoma to be?

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A. I think it's unlikely that it was a sarcoma.
Q. And is there any absence or presence of some characteristic that you could explain to the jury in simple terms that would lead you away from any belief that it was a sarcoma?
A. I don't believe the lung aspirate looks like --
JUDGE CARLSON: Mr. Merkel, excuse me. Mr. Liston --
MR. LISTON: Please the Court, we have an objection to everything in that answer after "like sarcoma" on line 14, and we need to be heard on that. His first sentence, we don't have an objection to.
JUDGE CARLSON: As I understand what the objection to be, reading it from page 58, line 14, page 58 down to line 20 on page 59, it would be based on speculation; is that correct?
MR. LISTON: That is correct.
JUDGE CARLSON: I sustain the objection from the way I read it and the witness testifies to. He states it's speculation.
MR. MERKEL: Start on line 21?
JUDGE CARLSON: Yes, sir. Line 21, page

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59.
MR. LISTON: Your Honor, on the next page, there will be some objections as to the witness's qualification to express certain opinions, and that's the subject of the motion that was filed

back in March, I believe. We'd need to probably hear that outside the presence of the jury, and I would estimate that it's probably another 30 minutes of the deposition, maybe not that long.

JUDGE CARLSON: The way it's been going, and if we get him, for benefit of the jury, we're on page 58, almost on page 59, and the deposition is 71 pages long, so let me let you step back in the jury room, and it may not take us but just a few more minutes. If it's going to take any amount of time, I won't keep you here any longer, but let me let you step back in the jury room for just a moment or two.

(Jury exits courtroom.)

JUDGE CARLSON: All right. Mr. Liston. Do you have an objection?

MR. LISTON: Yes, sir. The objection is to Dr. Fidler's being able to testify as to the cause of the lung cancer. We have no objection to his expertise and qualification as an expert to make the diagnosis that he made, but beginning in this

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series of questions starts, really, the first part of it on 59 at line 21 where Mr. Merkel starts asking him about the significance of 60 plus pack smoking history, and he starts talking about causation there. And then the question, itself, where Mr. Merkel asks him does he have an opinion as to the cause or origin of the tumor in his lung, beginning on page 60 at line 5, and continuing, there was an objection by Mr. Engram, and then that discussion continues to page 61, line -- through line 11, and the grounds of this, Your Honor, is that in the deposition previously, Mr. Engram had asked Dr. Fidler -- and I'm referring to page 43 at lines 10 through 13, the question was: "As a pathologist, you are not called on to determine the cause of anyone's lung cancer in any specific case, are you?" He says, "No."

And then on page -- the bottom of that page, Mr. -- at line 23, the question was, "Okay. A professional opinion to a reasonable degree of medical certainty, I mean, what I'm trying to find out, Dr. Fidler, is are you going to be a causation expert in this case?" His answer is, "No."

And then I believe there's another -- this is on page 61, and this is cross examination, I

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believe.

JUDGE CARLSON: That's part of what you're objecting to?

MR. LISTON: Yes, sir, 61. He says -- just let me get that page. At pages 66 and 70 where Mr. Engram, after these opinions came in, came back and started asking him questions about that, beginning on line 18, question to Dr. Fidler, "You are not an expert in carcinogenesis of the cause of lung cancer, are you?" Answer: "I am not." "You have never taken any classes on carcinogenesis or the cause of lung cancer?" "Only in medical school." "You have not taught any classes on the cause of lung cancer?" Answer: "No." Question: "Have you ever conducted any studies?" Answer: "Only a personal one." Then they go into that.

I'm down to line 15. "So you would agree that the medical literature reports 10 to 15 percent of lung cancer cases occur in nonsmokers." And then question at 20, "Did you publish any report on this study of a hundred patients that you did?" Answer: "No." Question: Have you ever authored any articles on the carcinogenesis of lung cancer?" Answer: "No." "Do you rely on any tests to support the theory of carcinogenesis as the cause of lung

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cancer?"

"Only what I read in current medical journals from time to time. "And there are multiple theories of carcinogenesis, aren't there?" "Yes." "Can you identify for me a single occasion that deals with using epidemiology to establish the cause of lung cancer in an individual?" "You mean in any one given person?" "Yes." "No, I don't know, because no such study exists." "Only somebody did radiation studies on someone's lungs that had been a miner, I think it means digging in the dirt or something like that, but you would agree that you can't extrapolate from epidemiology studies to determine the cause of lung cancer in an individual case?" He says "It would be pretty tough." He says, "Outside the context of litigation as a pathologist, are you ever called upon to determine a cause of a particular patient's cancer?" "No." "You would agree that there are different types of cancer that aren't associated with cigarette smoking?" "Yes." "Would you agree that different types of cancer are associated to a different degree to cigarette smoking?" And he says, "Yes."

"How do you rule out that if Mr. Nunnally had multiple risk factors, including smoking, how do

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you determine that it wasn't one of the other factors and that smoking did not contribute to his lung cancer?" "You couldn't do that, but I would suspect if he had other factors put together, they all played a part." "Is there any type of medical or scientific test that can be conducted to determine whether or not a particular individual smoking was the cause of that lung cancer?" "Not that I know of." "No type of genetic testing or analysis of mutational spectrum of cancer?" "I think that field is just opening up." You're not aware of any type of genetic testing specific to squamous cell lung cancer, are you?"

"No, I'm not." "You don't believe that smokers are immune from things that cause lung cancer in nonsmokers?" "No." "You can't say that Mr. Nunnally would not have developed lung cancer if he had never smoked, can you?" "No." "Would you agree that lung cancer is a multifactorial disease?" "I believe it is."

"Do you know that the vast majority of smokers don't get lung cancer?" "That's correct." "Have you seen reports of 85 to 90 percent of smokers -- let me turn it around, that only 10 to 15 percent of people who smoke develop lung cancer?"

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"My information is about 10 percent to 20 percent."

"When you talk about or when we talk about risk factors and cause, we're talking about two completely different things, aren't we?" "I don't know. I don't know the answer to that. Not every risk factor is a cause of lung cancer, that's correct." "But you always believe that smoking was the cause of a person's lung cancer if they had a 60 year smoking history?" "Probably."

"Let me restate that. It would certainly be part of the cause." "How can you distinguish between cancers that are caused by smoking from ones that are not caused by smoking? You can't, can you?" "I can't." "There's no medical on scientific way to predict which individual would develop lung cancer from smoking, is there?" "I don't think we have that at the present time."

If it please the Court, we submit that, based on the Doctor's answer, he does not qualify to give an opinion as to the cause of this lung cancer. Mississippi law supports that, Rule of Evidence 702 says that if the witness is not qualified by knowledge, skill, experience, training and education, they will not be allowed to testify. The memorandum brief that -- didn't you have a copy of

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this motion?

JUDGE CARLSON: Yes, sir, it's in the stack here. I've seen it.

MR. LISTON: Okay. I thought I could save time if you've got it there. The cases that support this "Goforth versus City of Ridgeland" where the Supreme Court affirmed the trial court's exclusion of a dentist's expert testimony as to the possible effect of the Defendant's dental appliance on the results of an intoxilizer test, because despite the witness's dental expertise, he was not an expert on that specific issue.

And the other cases that we cite in this go to that very issue, and it's applicable to this case. No question Dr. Fidler is an expert pathologist, but on the specific issue or field of causation of the conditions that he's qualified to diagnosis, he, by his own admission, is not qualified to do that.

Right recently, the Mississippi Court of Appeals -- and I'm sorry, I -- the case has just slipped my mind, I think about a month ago Dr. Forbes from Mississippi State and an accident reconstructionist from Montgomery, Alabama, named Medina, I believe, were both held disqualified as

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experts to testify as to the manner in which a trailer hitch failed and the trailer came loose and hit someone that the car was pulling, not because they were not qualified as engineers, but because by their own testimony they said that they were not qualified in that specific field to talk about the failure of that ball that held that trailer there. I can get a copy of that case overnight for the Court if you'd like to look at it.

But in that case, the Court of Appeals said that the trial court is the gate keeper on the expert business. They didn't go as far as to adopt

the Daubert standards in the Federal Court, but they did say that the Court is a gate keeper and is obligated in that role to make sure that all of the requirements of a -- permitting a witness to testify as an expert must be met before those opinions are given to -- that, number one, by training or specialized knowledge he's qualified to do it.

In this case, Dr. Fidler says he's not, secondly, that the testimony would aid the jury in some way, and if he's not qualified, there is no way that his opinion could aid the jury any more than mine could when I'm not qualified to do that. So we submit, may it please the Court, that Dr. Fidler

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just went outside his area of expertise in attempting to say that smoking caused this particular lung cancer, and again, we're not arguing about his qualifications to testify as to the condition in Mr. Nunnally's lung, but he's gone too far and outside his field by saying what caused that. And it should not be permitted.

JUDGE CARLSON: Mr. Merkel.

MR. MERKEL: Your Honor, Mr. Liston hit three different areas, and I'll try to take them in order. First, the Doctor is not a paid, hired expert. That's why he said in the earlier part when Mr. Engram was testifying in that he was not here to testify about causation. He didn't know what he was here to testify for. Mr. Engram had subpoenaed him and called him as a witness for discovery purposes. To make sure there was no question but what Mr. Engram could do whatever he wanted about that area, I advised Mr. Engram in the deposition which we attempted to read so that we'd all be in context that whether the Doctor came there prepared to testify about that, I was certainly going to ask him those questions. So that's why he had said he was not here for that purpose and was not an expert in -- to be a hired expert or was not planning to

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give testimony in that area.

When I got over here and asked him the question and Mr. Engram objected, I asked the question, "Based on your review and analysis and so forth, do you have an opinion?" Mr. Engram objected. I said, "Doctor, my question is also predicated" -- and I'm on page 60, Your Honor, bottom, line 20 -- "is also predicated upon your training, your experience of some 35 years in this practice. I'm not asking for a personal off the wall opinion but a medical opinion to a reasonable degree of medical certainty. Again, 51 percent better as to the cause of the tumor." And then he answered. "My opinion, based on a review of hundreds of charts and hundreds or even thousand lung cancers, with that smoking history, his lung cancer was almost certainly caused at least in large part by his smoking."

Now, that's his opinion. It's based on his experience and his training. The fact that he is not called on routinely to make that determination is a result of the medical status. Nobody cares in treating it whether it was caused by

cancer or asbestosis or something else, so he doesn't put that on a pathology report.

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But that doesn't mean, and in fact, when they got into his cross examination, and of course, Mr. Engram has done a wonderful job of cross examining him, and that's what the proper approach here is. I mean, he can challenge the opinion with a cross examination, but he asked him if he had ever done any studies, and amazingly, he had. He recites the fact that he personally kept records showing the incidence of lung cancer in the incidents of heavy smoking, and that's all related.

So not only does he have a great deal of experience in it, he's also made a study, himself, from that experience from his own clinical practice and is far more qualified to testify about this than I would imagine 99 out of 100 pathologists might be with that history.

The only requirement -- I don't agree -- I mean, disagree with any of Mr. Liston's law cases. It's not a matter of strange law or new interpretation. It's simply if an expert by training or experience is qualified to give opinions that would be helpful to the jury, he may do so. They can considers examine him, do whatever they want all day. But he's qualified by training, he teaches in his experience by thousands of lung

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cancer cases where cigarettes are involved and history, and he's even made a study, himself, where he kept data and statistics on it. So he's eminently qualified.

And his opinion is not a wishy-washy, namby-pamby thing. He said it's almost certainly caused by it, not just a mere predominance or whatever, but almost certainly.

I can't imagine a more legitimate opinion that could be in a medical legal case than one like this where he has not been paid by anybody, he's not somebody's hired gun. He's basing it on his actual involvement in the case, his knowledge of the case in the appearance of all of the slides and pathology that he's looked at and his studies and experience.

And I think it's no question it's admissible. They can cross examine it, and they can challenge it in that fashion, but he is qualified to make those -- form those opinions.

MR. LISTON: Your Honor, I'll be very brief. Whatever Mr. Merkel's argument is, and he's good, he can't arise above this question and answer. "Dr. Fidler, you are not an expert in carcinogenesis or the cause of lung cancer, are you?" Answer: "I am not."

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Now, that very same thing happened to Richard Forbes in Mississippi State in that case I mentioned to you, and Medina, the accident reconstructionist from Montgomery, Alabama. They were qualified in other fields, Dr. Forbes an engineer, but he testified and so did Medina that they weren't an expert in the area on the specific issue that they were trying to give an opinion on,

and the Court said that's the long and short of it.
If the man doesn't think he's an expert, himself, and admits it, we're not going to let him testify, and that's exactly what Dr. Fidler did. I don't see how in the world he can ever get above that.
MR. MERKEL: I don't know of anything on earth that says you have to be an expert in carcinogenesis to give opinions on the subject matter we're talking about here.
JUDGE CARLSON: I had read ahead trying to keep up with where we were in the deposition, but looking ahead to where the objections might be, that was the reason I was prepared on the first objection on Dr. -- Dr. Fidler's speculation. And I had also read ahead to the objection that's going to go to Dr. Fidler being able to testify as to any causation

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concerning cigarette smoking, and I'd agree wholeheartedly with the Supreme Court's pronouncement that this Court takes very seriously and does not deal with it flippantly when it comes to Rule 702 and this Court being the gate keeper and no Court, this Court or any other Court, should flippantly declare any particular witness an expert just because he says he's an expert or let him offer opinions because he believes he can offer an opinion.
That would basically abrogate, judicially abrogate Rule 702, expert rule. I don't think the Court simply is going to sit back and let any witness come in and say, "I'm an expert, so let me give opinions." I agree with that concept that this the Court, the trial court, being the gate keeper. Looking at all of this and the totality of the record, I'm satisfied that the objection should be overruled. It will be so noted and overruled. And I'll permit the testimony.
And I think we can move -- we kept the jury here. We better go ahead and let them get through with the deposition. I think it will not take the more than just a few minutes.
MR. LISTON: In light of your ruling, we

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will need to read that redirect.
JUDGE CARLSON: Yes, sir, all right.
MR. MERKEL: Jack, why don't you reread the question that the objection was made on, and I'll read the first sentence. Is that what you're saying, on line 58, Bill, line 13?
MR. LISTON: Hold on just a second.
JUDGE CARLSON: We start, I think on page 59, line 20 --
MR. MERKEL: We never gave the answer, Your Honor, on line 58 where Bill said he didn't object to the opinion about the lung aspirate, but when he got into the speculation down below, the first sentence, Bill?
MR. LISTON: Yeah, "I don't believe the lung aspirate looks like sarcoma."
MR. MERKEL: Reread that question, Jack, and I'll read that one line.
MR. DODSON: When we get over to page 61,

why don't we just go right down to your answer and scratch through all that colloquy.

MR. MERKEL: Yeah, scratch out everything between counsel.

JUDGE CARLSON: Start on line 9, page 58, get the first sentence of the answer, and skip on

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over towards the last.

(Jury enters courtroom.)

JUDGE CARLSON: All right. Ladies and gentlemen, to move on through this, I think it will take just a few more minutes, and we'll stop for the day. I promise you. Mr. Dodson.

CONTINUATION OF READING OF DEPOSITION OF FIDLER:

Q. "And is there any absence or presence of some characteristic that you could explain to the jury in simple terms that led you away from the belief that it was a sarcoma?

A. I don't believe the lung aspirate looks like sarcoma.

Q. What is the significance, Dr. Fidler, with a 60 plus pack smoking history with a patient presenting with lung lesion?

A. Well, we have seen it over and over again for the past -- well, from my experience the past 30 to 35 years. The more a patient smokes, the more likely a tumor in his or her lung is likely to be carcinoma and be tobacco associated or smoking associated.

Q. Based on your review and analysis of the pathology in this case, Doctor, and the medical records, and assuming for the sake of the question

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that Mr. Nunnally was a 60 plus pack a day smoker -- 60 plus pack year smoker, do you have an opinion as to the most likely, more probable than not cause or origin of the tumor in his lung? And Doctor, my question is also predicated from -- predicated based on your training, your experience of some 35 years in this practice. I'm not asking for a personal off the wall opinion, but a medical opinion to a reasonable degree of medical certainty, again, 51 percent or better, as to the cause of the tumor present in his lung.

A. My opinion, based on a review of hundreds of charts and hundreds or even a thousand lung cancers, with that smoking history, his lung cancer was almost certainly caused in large part --

MR. LISTON: You read that wrong.

JUDGE CARLSON: You need to read that again. You left out a key phrase there.

A. My opinion based on a review of hundreds of charts and hundreds or even a thousand lung cancers, with that smoking history, his lung cancer was almost certainly caused, at least in large part, by his smoking.

Q. You were asked certain questions or maybe asked certain questions, Doctor, as to whether you

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did certain staining or looked at certain digestion, things like this on slides. Was there anything that you feel was necessary to have been done in order to make you comfortable and satisfied to a reasonable

degree of medical certainty with your diagnosis?
A. If there would have been, we would have done it.
Q. Now, in the event you're asked, Doctor, about the middle lobe having the presence of some clear cell characteristics in it, for the jury's benefit, first, what are we talking about when we say clear cell?
A. The cytoplasm of the cell, in other words, the portion of the cell outside the nucleus has a water clear or nearly a water clear appearance as though there's nothing there.
Q. And if there is some of that present in that middle lobe cancer, does that in any way mitigate against your previously stated opinion that this is a squamous cell origin that metastasized to the middle lobe?
A. Not in my opinion. Squamous cell carcinomas often have a clear cell component to them.
Q. You have, I think, noted then

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histologically there was some difference between the upper lobe tumor and the middle lobe tumor. Again, for the jury's benefit, what significance does that have, if any, in determining whether or not those two tumors are from the same origin or from different origins?
A. I don't think I can answer the question completely, but I'll try. When you radiate a tumor, some of it may die, some of it may change its morphologic appearance under the microscope, and some of it may not. So it's perfectly conceivable in this case that although most of the tumor was necrotic, the portion that was in the right upper lobe was rather pleomorphic and consistent with a radiated tumor, and the portion in the lower lobe or middle lobe was not affected to the same extent.
We can see lung cancers that are squamous in one part, adeno in another part, and small cell in another part. The same thing is true of breast cancers or any other kind of cancers. Some of them are partly well differentiated, and some are partly poorly differentiated in the same tumor.
Q. You mentioned, I believe, Doctor, that you reviewed a certain textbook or work in pathology by Doll and Hammer.

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A. Yes.
Q. And to the extent it's one of the many authoritative works that might be determined authoritative, did that mean you would adopt any statement contained in that book without regard to what it said or where it might be located?
A. No.
Q. Depending on the diagnosis made in a lung tumor, are the modules of treatment different depending upon the diagnosis of the type and origin and so forth, Doctor?
A. Yes.
Q. So from the treating standpoint, was the diagnosis that you and Dr. Courington made in this case the very best that you could do for the purpose

of treating this patient?
A. Yes, I think so.
MR. DODSON: And this is by Mr. Engram, cross -- direct examination.
Q. "Dr. Fidler, in your practice as a Doctor, isn't it common for you to use the terminology to rule in or rule out disease?
A. Yes.
Q. So it's not something foreign for a doctor to suggest upon review of pathology to go

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back to the treating physician, the primary care physician and to suggest that the physician attempt to rule out a primary renal cell carcinoma, for example?
A. That would be -- could be common.
Q. And you did do that almost everyday?
A. Often.
Q. Do you use the terms rule in or rule out?
A. Often.
Q. You said that the right middle lobe nodule was consistent with an intrapulmonary met from the right upper lobe?
A. Yes.
Q. Isn't the right middle lobe nodule also consistent with a met from a kidney or pancreas?
A. Yes, but less likely.
Q. In your opinion?
A. In my opinion.
Q. Would you agree that there was a different degree of necrosis in the surgical pathology from Houston taken in the upper lobe compared to the middle lobe nodule?
A. Yes.
Q. There was very little necrosis in the right middle lobe?

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A. That is correct.
Q. You would agree, Dr. Fidler, that there are some forms of cancer that are not associated with smoking?
A. Yes.
Q. Would you agree that some smokers may get lung cancer for the same reason that nonsmokers get lung cancer unrelated to smoking?
A. Repeat that.
Q. Yes. Would you agree that some smokers may get lung cancer for the same reason that nonsmokers get lung cancer unrelated to smoking?
A. I'm not sure unrelated.
Q. Do you think that --
A. My opinion would be that, for example, a smoker may get lung cancer if he or she is a hard rock asbestos miner or a chromium worker, but I still think the smoking would have a part to do with it. I cannot than tell you how much part.
Q. Would you agree there are some smokers who get lung cancer for the same reasons that nonsmokers get lung cancer unrelated to their smoking?
A. Yes.
Q. You would agree that genetics plays an

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important part in whether somebody developed lung cancer?
A. Probably, but I don't know how much.
Q. Dr. Fidler, you're not an expert in carcinogenesis for the cause of a lung cancer, are you?
A. I am not.
Q. You've never taken any classes on carcinogenesis or the cause of lung cancer?
A. Only in medical school.
Q. You've not taught any classes on carcinogenesis or the cause of lung cancer?
A. No.
Q. Have you ever conducted any studies on carcinogenesis or the cause of lung cancer?
A. Only a personal one.
Q. What's that?
A. Well, the first time I got to this hospital, the first year I worked here, I noticed we had an awful lot of lung cancer. So I just decided to look at the smoking histories of a hundred consecutive patients we had here that were diagnosed. So I either reviewed their charts, and if there was no smoking history in the chart, I asked the patient. Over 90 of them were current or

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past cigarette smokers.
Q. So you would agree that the medical literature reports 10 to 15 percent of lung cancer cases occur in nonsmokers?
A. That's probably about right. That includes the types that aren't associated with smoking.
Q. Did you publish any report on the study of the hundred patients that you did?
A. No.
Q. Have you authored any articles on the carcinogenesis or the cause of lung cancer?
A. No.
Q. Do you rely on any text to support any theory of carcinogenesis or the cause of lung cancer?
A. Only what I read in current medical journals from time to time.
Q. And there are multiple theories of carcinogenesis, aren't there?
A. Yes.
Q. Can you identify for me a single publication that deals with using epidemiology to establish the cause of lung cancer in an individual?
A. You mean in one given person?

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Q. Yes.
A. No, I don't know.
Q. Because no such study exists?
A. Only if somebody did radiation studies on someone's lung that had been a miner or something like that.
Q. But you would agree that you can't extrapolate from epidemiology studies to determine the cause of lung cancer in an individual case?
A. It would be pretty tough.
Q. Outside the context of litigation, as a

pathologist, are you ever called upon to determine the cause of a particular patient's cancer?
A. No.
Q. You would agree that there are types of cancer that are not associated with cigarette smoke?
A. Yes.
Q. Would you agree that different types of cancer are associated to a different degree with cigarette smoking?
A. Different types of lung cancer?
Q. Yes.
A. Yes.
Q. How do you rule out that if Mr. Nunnally had multiple risk factors, including smoking, how do

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you determine that it wasn't one of the other factors, and that smoking did not contribute to his lung cancer?
A. You couldn't do that, but I would suspect that if he had other factors, put together, they all played a part.
Q. Is there any type of medical or scientific tests that can be conducted to determine whether or not a particular individual smoking was the cause of that lung cancer?
A. Not that I know of.
Q. No type of genetic testing or analysis of mutational spectrum of cancers?
A. I think that field is just opening up for lung cancer.
Q. You're not aware of any type of genetic testing specific for squamous cell lung cancer, are you?
A. No, I'm not.
Q. You don't believe that smokers are immune from things that cause lung cancer in nonsmokers?
A. No.
Q. You can't say that Mr. Nunnally would not have developed lung cancer if he had never smoked, can you?

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A. No.
Q. Would you agree that lung cancer is a multifactorial disease?
A. I believe it is.
Q. Do you know that the vast majority of smokers don't get lung cancer?
A. That's correct.
Q. Have you seen reports of 85 to 90 of smokers -- let me turn it around, only 10 to 15 percent of people that smoke develop lung cancer?
A. My information is about 10 percent to 20 percent.
Q. When you talk -- or when we talk about risk factors and cause, we're talking about two completely different things, aren't we?
A. I don't know.
Q. Not --
A. I don't know the answer to that.
Q. Not every risk factor is the cause of lung cancer?
A. That's correct.
Q. Would you always believe that smoking was

the cause of a person's lung cancer if they had a 60 year smoking history?

A. Probably. Let me restate that. It would

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certainly be part of the cause.

Q. How can you distinguish between cancers that are caused by smoking from ones that are not caused by smoking? You can't, can you?

A. I can't.

Q. There's no medical or scientific way to predict which individual will develop lung cancer from smoking, is there?

A. I don't think we have that at the present time.

MR. ENGRAM: That's all the questions I have. Thank you."

JUDGE CARLSON: Ladies and gentlemen, we'll certainly stop here and start back at 8:30 in the morning. Again, I just need to remind you about not discussing the case, and thank you very much. Hope you have a good evening. We'll see you back here at 8:30 in the morning.

(Jury exits courtroom.)

MR. LISTON: We'd like to mark the deposition as the next Exhibit.

JUDGE CARLSON: It will be marked for ID.

(Exhibit 764 marked for identification.)

JUDGE CARLSON: We'll be recessed until 8:30 in the morning.

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(Time Noted: 5:41 p.m.)